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COMMON AND HEPATIC DUCT STONES

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THE early symptoms of cholelithiasis are usually related to the gall-bladder, since most gallstones originate there. Most of the gallstone colics are due to stones lodged in the cystic duct. Serious situations due to stones within the gall-bladder occasionally arise, such as acute and subacute cholecystitis. Obstructions due to stones lodging in the cystic duct sometimes occur and, as the result of infection and distention, gangrene and perforation of the gall-bladder may occur.

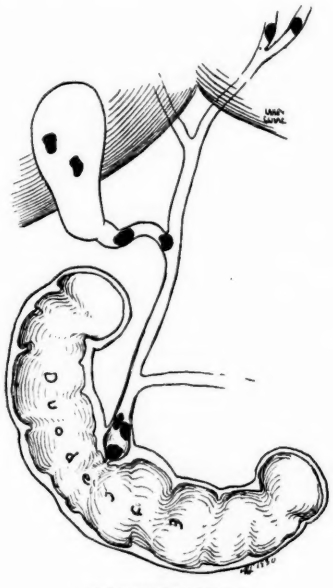

ILLUSTRATION I.

This diagrammatic drawing illustrates the points at which stones in the biliary tract are found.

The point at which stones are most commonly overlooked is at the ampulla of Vater where the common duct enters the duodenum.

As long as the stones and infection are within the gall-bladder and the common and hepatic duct are unobstructed and not infected, damage to the liver is not of any considerable amount. When, however, stones migrate to or form in the common or hepatic duct and infection also occurs in these main bile channels, definite effects upon the biliary tree occur, and factors appear which influence and increase the operative and non-operative mortality in the management of this condition.

We have occasionally found stones in the common duct (Ill. I) in addition to those in the gall-bladder in young people, but this is the exception. Most of our cases of common and hepatic duct stone have been found in older individuals in whom gallstones have doubtless previously existed in the gall-bladder for some time. One must, I believe, accept the probability that the longer gallstones have existed in the gall-bladder, the greater the chances of there being stones and infection in the common and hepatic ducts.

Based upon our operative experience with biliary tract disease in the group of cases here reported, thirteen hundred and six cases, we cannot avoid the conclusion that the late surgical treatment of cholelithiasis will result in a high incidence of common and hepatic duct stones and infections and that when operations are done upon patients with common and hepatic duct stones and infections, the mortality will be very much higher than when they are done upon patients at such an early stage that in most of the cases the stones will still be only in the gall-bladder.

In discussing the need for earlier diagnosis and earlier operation in patients with gallstones, I have, in another paper on this subject, employed the present and past methods of handling patients with prostatic obstruction as a comparison with the present and also a more ideal method of handling patients with gallstones and biliary tract infection. This comparison makes it so possible to bring out some of the defects and penalties of late surgery in cholelithiasis as compared with early surgery that it may well be employed again.

In the early operative experiences with obstruction to the urinary outlet by an hypertrophied prostate, the attention of surgeons was directed at first to the bladder itself, and we were wrongly inclined to visualize the very serious mortality which was associated with the early surgery of this condition as related to the bladder itself and infections within it. It was not until we began to contemplate prostatic surgery in terms of kidney function and to undertake preliminary drainage measures to restore damaged kidney function that the mortality of this operative procedure came down to within reasonable and satisfactory limits. Later still we realized that early operation, before functional damage to the kidney had occurred from

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back pressure and infection, was still better than to have to restore kidney function by prolonged preliminary drainage.

We are, at least in some measure, in a somewhat similar position with cholelithiasis. We tend today to consider cholelithiasis largely as a gall-bladder problem, and because it not infrequently remains solely a gall-bladder problem over a number of years, we tend to visualize mortality as in the gall-bladder.

Just as in the relation of the kidneys and the

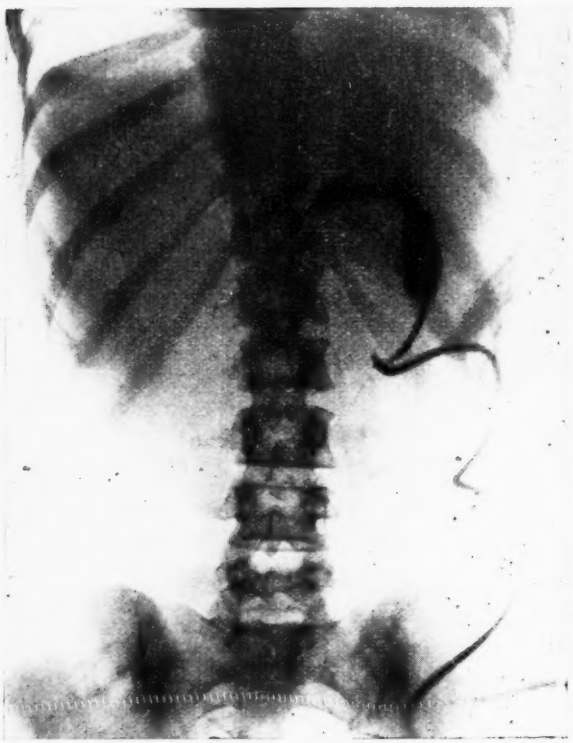

ILLUSTRATION II.

This is an x-ray picture of the main bile ducts in a patient whose gall-bladder containing stones was removed. At the same time, because of a past attack of jaundice, the common duct, although normal appearing, was opened, explored, found negative and a T tube sutured into it. At the end of ten days, a lipiodol injection was made through the tube to demonstrate the size of the bile ducts and any possible dilatation of the biliary tree.

Note the normal size of the unobstructed and undilated common duct, and absence of dilatation of the biliary tree in this patient in whom all of the cholelithiasis and injection was confined to the gall-bladder. Compare this picture of normal bile ducts with the following two of dilated and infected ducts.

kidneys' function to the surgery of prostatic hypertrophy, so we must realize that much of the mortality of the surgery of cholelithiasis is not related particularly to the gall-bladder, but to the liver and liver function due to obstruction to and infection of the biliary tree. (Ill. II, III and IV.)

When we realize that the mortality of late operations for cholelithiasis when common and hepatic duct stones and infection are present is so distinctly higher, 13.3 per cent, than that when cholelithiasis is still limited to the gall-bladder without infection of the main bile channels (not over 4 per cent), we shall be forced to the logical position that it is improper to permit patients to pass through repeated attacks of gallstone colic and to be operated upon at such a late stage that stones have migrated to or formed in the common or hepatic ducts. When, in addition, jaundice with its very serious possibility of hemorrhages has occurred in those cases, we realize how important it is that early operation while the stones are still in the gall-bladder be urged.

The comparison can be carried still further in that preliminary common duct drainage can be instituted with common duct obstruction as it is in the preliminary urinary bladder cystostomy. Preliminary drainage of the common duct is by no means, however, the simple, safe and satisfactory procedure that preliminary drainage of the urinary bladder is. The process of doing even simple incision of the common or hepatic duct is almost as extensive and dangerous as that of opening the duct and removing the stones. Therefore we must, because of this fact, admit that early operation is even more necessary in cholelithiasis than it is in prostatic hypertrophy.

As the result of a not inconsiderable experience with common and hepatic duct stones and infections, we have been particularly interested in this subject. If one will look at the figures submitted in Table I, it will be obvious that an added experience and interest in common and hepatic duct stones and infections have resulted in an increasing percentage of cases in which we have explored for and discovered stones in the main bile ducts.

TABLE I

PERCENTAGE OF COMMON AND HEPATIC DUCT STONES DISCOVERED

Years	Total Cases	Ducts Explored	Stones Discovered and Removed
1910-26	619	15.5%	8.4%
1926-31	653	32.4	14.0
1929-30	137	35.8	16.1
1930-31	138	42.5	21.0

There is a tendency to assume the position that unless jaundice is associated with biliary colic, one cannot make the diagnosis of the presence of a common or hepatic duct stone or infection. In this connection it is interesting and instructive to realize that in 39 per cent of all of the cases in which we have found and removed stones from the main bile channels, jaundice has not been present.

If one admits the danger of common and hepatic duct stones and infections (and it cannot be denied) and realizes that in our series over one-half of the cases did not show the feature (jaundice) by which they are usually diagnosed, then the need for early operation before stones occur in the main bile channels becomes self-evident.

There has been a tendency also to assume the position that exploration of the common and hepatic duct adds to the mortality of an operation for gallstones. There can be no question but that demonstration and exploration of the common and hepatic duct demand experience, technical skill and judgment. These, however, one assumes to exist in anyone who undertakes surgery of such magnitude as is frequently associated with operative procedures for biliary tract infection and cholelithiasis. In the hands of experienced surgeons I do not believe that the addition of incision and exploration of the ducts particularly raises the immediate and certainly not the ultimate mortality in the patient with cholelithiasis. Based upon our mortality figures from year to year in which, in spite of an ever-increasing number of cases in which we explore the ducts, the mortality rate has progressively diminished, the above conclusion is true.

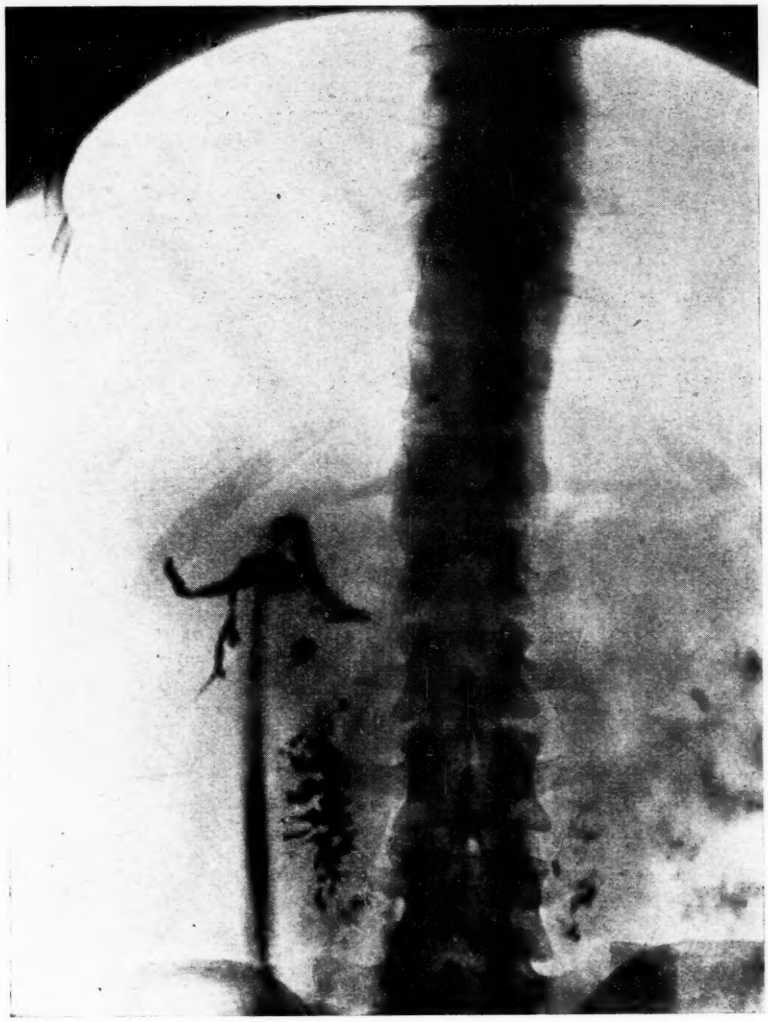

ILLUSTRATION III.

This is an x-ray picture of the main bile ducts in a patient ten days after cholecystectomy, removal of stones from the common duct and suture of a T tube into it. Lipiodol has been injected into the ducts through the T tube to demonstrate their size. Compare with the foregoing case and picture and note the degree of dilatation in the main bile ducts and the beginning dilatation of the intrahepatic ducts.

TABLE II

MORTALITY STATISTICS 1910-1931

Years	Cases	Deaths	Per Cent
1910-27	619	35	5.6%
1927-28	198	2	1.1
1929	137	5	3.6
1930	138	3	2.1
1931	118	4	3.4
1927-31	591	14	Av. 2.3%

The causes of these deaths and their relation to common and hepatic duct stones and strictures are interesting and enlightening.

Both of the deaths in 1927 and 1928 were in patients with common and hepatic duct stones.

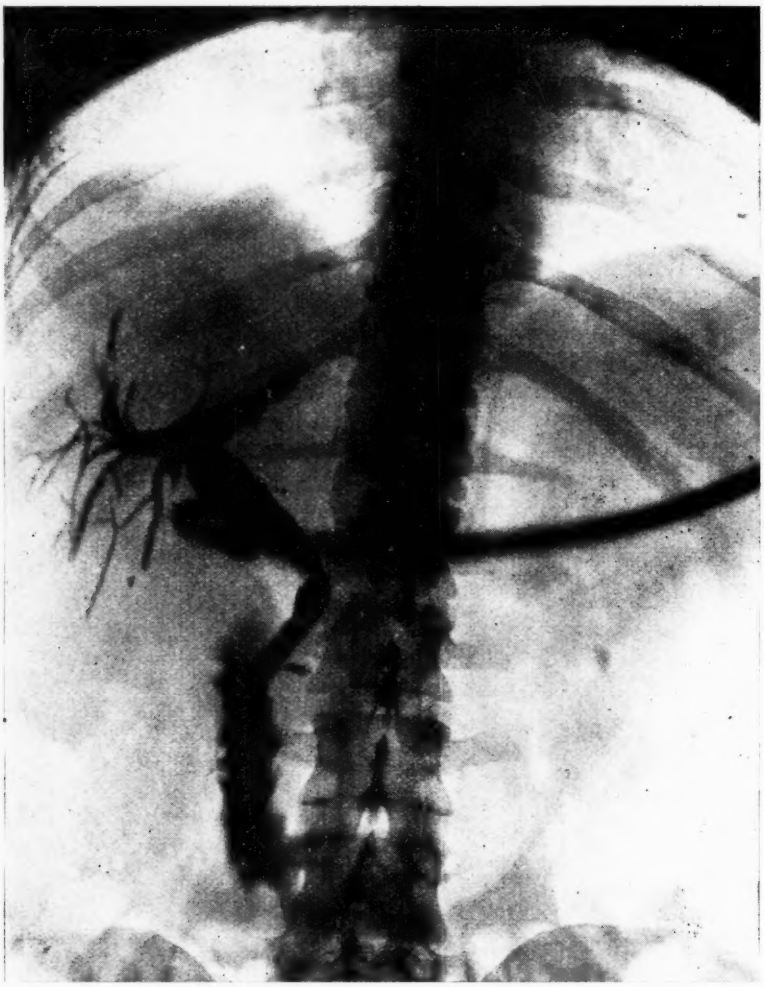

ILLUSTRATION IV.

This is likewise an x-ray of the main bile ducts of a patient following cholecystectomy, removal of long standing stones in the common duct and the insertion of a T tube into the common duct.

This picture represents the ill effects of long standing common duct obstruction and dilatation. Note the marked dilatation of the common and hepatic ducts and also the intrahepatic ducts in this picture. While the finer bile radicals are not demonstrable by these lipiodol injections, one can readily visualize the dilatation, infection and back pressure which must be associated with such increase in diameter of the main bile channels.

Liver tissue has great ability to regenerate but one cannot observe such an x-ray as this without appreciating that such degrees of dilatation represent considerable interference with liver excretion and consequently interference with liver function.

This x-ray with its demonstration of the bad results of long standing cholelithiasis is a graphic argument for early operation while stones are still in the gall-bladder in patients with cholelithiasis.

in patients with common and hepatic duct stones.

Of the five deaths in 1929, two were in patients with common or hepatic duct stones. Of the remaining three, two were from pulmonary emboli and one from pancreatitis.

Of the three deaths in 1930, two were in patients with common duct strictures following previous gall-bladder operations elsewhere, one in a patient with acute nephritis and one from pneumonia.

Of the four deaths in 1931, two were in patients with common duct strictures following previous gall-bladder operations elsewhere, one in a patient with acute nephritis and one from pneumonia.

From 1927 to 1931 there were fourteen deaths in 591 cases, a mortality of 2.3%. Of the four-

teen deaths, eight, or 57%, were in patients with stones or strictures of the common or hepatic ducts.

We have always felt if we have operated upon a patient for gallstone colic, removed a gall-bladder filled with stones but left stones in his or her common duct (which we have done several times), that we have left behind the factors most liable to produce an ultimate fatality, and that we may well have left behind the particular factors that were producing symptoms. While some few patients in whom common or hepatic duct stones are left will pass all of the stones, many more will not pass them, they will occasion recurrent symptoms, and re-operation with added technical difficulties and a higher mortality will eventuate.

Not only have we discovered and removed common duct stones in patients in whom no jaundice was or had been present, but we have discovered and removed them in patients in whom no stones could be palpated in the ducts. In addition to these features, stones have been discovered and removed in patients in whom there was no marked dilatation of the ducts and no distinctive thickening of the ducts.

The point at which stones are most likely to be overlooked is the portion of the common duct where it enters the duodenum at the ampulla of Vater. This is the point at which we have discovered most of the common duct stones which we have demonstrated to have been present without clinical or palpable evidence of their existence.

The common duct at the region of the ampulla of Vater and just above it is, in many cases, surrounded by the thickened head of the pancreas, a feature which makes palpation, particularly of small stones within the duct at this point, quite uncertain. We have so frequently discovered and removed unsuspected common duct stones from the ampulla of Vater that we now settle as to whether we should open and explore the ducts in addition to removing the gall-bladder on additional factors besides the presence of jaundice with past or present attacks and palpation of stones within the ducts.

In order to be as certain as we can that we do not overlook stones within the ducts, we have laid down the following conditions which we believe are indications for opening and exploring the main bile channels: Whenever there has been a history of jaundice associated with either the past or present symptoms which lead to the operation for biliary tract disease; whenever anything suspicious of a stone or stones can be palpated within the ducts; whenever the head of the pancreas is so thickened that stones at the ampulla of Vater might well be impossible to palpate, particularly in patients with long-standing gall-bladder disease; whenever the common duct is unduly large or thickened. We must state in this connection, however, that we have occasionally discovered small common duct stones at the ampulla in undilated and unthickened common ducts. We feel that the ducts should be opened and explored in all patients who have a history of long-standing gall-bladder disease with repeated attacks of colic, and we feel very strongly that the ducts should be opened and explored routinely in all patients in whom is found a contracted and thickened gall-bladder. The reason for advising exploration of the main bile channels in these two latter conditions is that with long-standing gall-bladder infection and cholelithiasis, constant infection of the common and hepatic duct has been present for a long time. This infection produces factors favorable to the formation of stones within the ducts, and no one now doubts that they can and do form there. Long-standing stones within the gall-bladder and repeated biliary colic also provide favorable factors for the migration of stones from the gall-bladder into the common and hepatic ducts.

The discussion of common and hepatic duct stones has dealt thus far with stones within the common duct, because in our experience stones in the main bile channels are more frequently found in this portion of the bile ducts than in the hepatic duct portion, and, in addition, except for the intrahepatic ducts, there is little likelihood of overlooking stones in the main hepatic duct, since it is possible to pick this portion of the duct up and roll it between one's fingers.

Stones in the hepatic ducts unfortunately occur when there are stones also in the common duct. Due to the direction of the bile stream and resulting excretory pressure, single stones and stones in limited numbers in the ducts tend to migrate to the lower end of the ducts. When, therefore, stones are present in the hepatic ducts, and particularly when they are present in the intrahepatic portion of these ducts, it is usually due to a large accumulation of stones, infection of the entire biliary tract and probably the production of stones at all levels of the ducts. In support of this assumption is the fact that we have operated upon several patients whose common and hepatic ducts were filled with hundreds of stones extending from the ampulla of Vater up into the intrahepatic branches of the hepatic ducts. We have removed all of the stones as far as we could tell, and have re-operated such cases at later dates and found the ducts again filled with stones. In these cases the gall-bladder had been previously removed and the number of stones found at the second operation was too great to be accounted for by stones which were possibly left in the intrahepatic ducts at the first operation.

We must accept the probability, we believe, that when the entire biliary tract harbors stones, there will be a tendency for the re-formation

of stones within the ducts and a recurrence of symptoms from them.

We have no suggestions as to how one may be sure of removing all intrahepatic stones within the right and left branches of the hepatic ducts. We believe that the admission that recurrence of stones occurs within the common and hepatic duct advances a strong argument in favor of the original premise of the paper. That is, that cholelithiasis should be diagnosed earlier than it has been in the past years, and that patients should be advised to be operated upon earlier, while the stones are still in the gall-bladder and before infection, thickening and dilatation have occurred within the main bile channels. (Ill. II, III and IV.) The best results and lowest mortalities are obtained in cholelithiasis while the stones are still in the gall-bladder and the ducts at least not seriously infected.

CONCLUSIONS

Common and hepatic duct stones tend to occur in patients who have had stones and infection within the gall-bladder for a long time.

In thirty-nine per cent of the operated cases in which we have found common and hepatic duct stones, there has been no associated jaundice.

Common duct stones, particularly at the ampulla of Vater, can exist in the entire absence of any certain evidence of their presence, even that of palpation.

The mortality of operations for gallstones when there are stones in the common and hepatic duct is distinctly higher (13.3%) than when there are stones only in the gall-bladder (4%). The indications for opening and exploring the common duct which we have employed are stated.

A considerable part of the mortality of the late gallstone operations is associated with dilatation and infection of the biliary tree and diminished liver function.

The diagnosis of gallstones should be made early. Patients should not be permitted to pass through several attacks of gallstone colic. Earlier operations for gallstones will result in lower mortality rates and better end results.

THE HINTON TEST IN THE DIAGNOSIS AND TREATMENT OF SYPHILIS IN A PENAL INSTITUTION*

BY HELEN M. WIESTLING, M.D.,† AND ARTHUR BERK, M.D.†

IN the penal institutions of Massachusetts, the Wassermann test is the one officially used as an aid in the diagnosis and management of syphilis. Since the Hinton test has been claimed by many to be superior to the Wassermann and other tests, we undertook to determine what especial advantage, if any, this test has in the diagnosis and management of syphilis in a penal institution.

From 1911 to 1913 the diagnosis of syphilis at the Massachusetts Reformatory for Women was made on history and clinical findings alone. Eight cases of syphilis were diagnosed in 1911, and seven in 1912. In 1913 the Wassermann test became a part of the routine examination, and as a result there was an immediate increase in the diagnosis of syphilis, as evidenced by the following excerpt from the physician's report for the year 1913:

"Extremely interesting results have been obtained from the application of the Wassermann test for syphilis to all the women in our institution. During the past three months this laboratory test has been applied to the bloods of 239 women, with the result that 107 cases (44.7% of the total number) have been found to be infected with syphilis. Of great importance is the fact that but 48.5%of the 107 positive cases gave any history or presented any clinical manifestations of the disease. This demonstrated the value of the test in diagnosis."

In November, 1929, the Hinton test was instituted, in addition to the Wassermann test, as a means of serological diagnosis. During the succeeding eighteen months, 389 women were examined, of whom 139, or 35.7%, showed positive reactions at one time or another, or gave a history of syphilis or presented clinical signs or symptoms of the disease. Both Wassermann and Hinton tests were done on the same specimen of blood at the Massachusetts State Wassermann Laboratory. In each case, whether positive or negative, the results were checked by two or more serologic examinations, except in a few instances where transfer to another institution prevented this. A complete physical examination, including a neurologic examination, was made on each woman. Psychiatric tests and other special examinations were made on patients wherever indicated. Lumbar punctures were recommended on certain of these cases. Because of the patient's refusal, only 35 spinal fluid examinations were made. In addition to the serological and clinical findings, search was made in each case for a history of syphilis. Often a report from a hospital or court, or social agency, showed that the blood had at some time been positive, although the patient may have denied infection.

Table I gives the results of the Hinton and Wassermann tests on the 389 women studied. For the purpose of discussion, the cases have been divided into eight groups. The first seven

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groups were syphilitic women as far as could be determined on clinical or serologic grounds, or both, while the eighth group, which is the control group, was non-syphilitic as determined by the same standards.

TABLE I

Group	Hinton	Wassermann	Number of cases	
1.	Positive	Positive	41	139—clinically or serologically syphilitic.
2.	Positive	Doubtful	7	
3.	Positive	Negative	52	
4.	Doubtful	Negative	7	
5.	Negative	Positive	2	
6.	Negative	Doubtful	1	
7.	Negative	Negative	29	
8.	Negative	Negative	250	—Non-syphilitic

A comparison of the two tests in the 139 syphilitic cases is shown in Table II, and it is interesting to note here the greater percentage of positive Hintons.

TABLE II
(139 cases.)

	Positive	%	Doubtful	%	Negative	%
Hinton	100	71	7	5	32	23
Wassermann	43	31	8	6	88	63

We shall now discuss in some detail each of the groups listed in Table I.

Group I.

This group consists of 41 women who had positive Wassermann and Hinton reactions on the first blood examination conducted for this study. Thirty-three gave a history of syphilis. Of these fourteen showed on admission definite signs of syphilis such as healing chancre, fading secondary rash, Hutchinsonian teeth, or signs suggestive of syphilis of the central nervous system; the other nineteen were asymptomatic. Of eighteen cases of the positive history group, six showed persistent positive Wassermaan and Hinton reactions, following moderate treatment; two of these had skin lesions. Two cases showed doubtful Wassermann and positive Hinton reactions, and ten, negative Wassermann and Hinton reactions following treatment. In the latter, the Hinton became negative later than the Wassermann, following varying amounts of treatment. The advantage of this longer period of treatment is to be described in detail in another paper. Six of these were cases of early syphilis, showing skin manifestations.

In fifteen cases of the positive history group, the Wassermann became negative and the Hinton remained positive, following intensive treatment. In this group the Hinton test was helpful in the treatment of early syphilis, for the Hinton reaction, remaining positive longer than the Wassermann, indicated that treatment should continue for a longer period.

Eight of the forty-one women gave no history of infection, and with one exception their physical and neurological examinations were not remarkable. The exception was a patient who had white optic discs with atrophy of vessels and stiff and irregular pupils, giving the general appearance of retrobulbar neuritis rather than of optic atrophy—there was a history of alcoholism. Of the group of eight, three became Wassermann- and Hinton-negative after treatment. Three remained persistently positive with the Hinton test, while the Wassermann became negative during the course of treatment. In one of these the spinal fluid was negative as determined by the Wassermann test, the gold sol reaction, an estimation of the total protein, the globulin test and a cell count. The remaining two cases showed persistent Wassermann- and Hinton-positive reactions, in spite of adequate treatment. In these eight cases the Hinton reaction did not aid us in making diagnoses, but played its part in confirming the Wassermann. In three cases it indicated the wisdom of keeping patients under treatment for a longer period.

Group 2.

This group consists of seven cases showing positive Hinton and doubtful Wassermann reactions on the first blood specimen. Five of these gave a history of syphilis; two did not. Of the two that gave no history of syphilis, one showed such suspicious signs of congenital lues as prominent bosses, absence of outer third of eyebrows, and syphilis in siblings; the other had twelve consecutive doubtful Wassermann reactions while the Hintons were continuously negative after the first test, which was positive. We cannot say definitely that this patient was not infected with syphilis, but we feel that after studying the patient for sixteen months, with very little treatment, we are justified in assuming that the first Hinton was a false positive.

An outstanding case in this group is one of central nervous system syphilis whose blood Wassermann became negative, while the Wassermann reaction on the spinal fluid and the Hinton reaction on the blood remained positive under treatment.

In this group the Hinton test has aided us in making a definite diagnosis, when the Wassermann was doubtful, and aided us in continuing treatment on a case of central nervous system lues with a negative blood Wassermann. One case was considered false positive Hinton.

Group 3.

This group consists of fifty-two cases showing negative Wassermann and positive Hinton re-

actions on the first test. Of these, thirteen gave no previous history of syphilis; thirty-nine gave positive histories. Of the total of fifty-two cases, twenty-nine remained Hinton-positive after prolonged treatment; twenty-three became Hinton-negative and remained so. The group of twenty-nine remaining Hinton-positive consisted essentially of women who had had the disease for a number of years.

In this group the Hinton test, by remaining positive longer than the Wassermann, has insured adequate treatment, especially for those patients who had the disease many years with little or no treatment.

Group 4.

This group consists of seven patients with negative Wassermann and doubtful Hinton reactions. None of these gave a history of syphilis. On rechecking, the Hinton reaction of one became positive and remained positive throughout treatment, while the Wassermann reaction remained negative. In two cases, the Hinton reactions became negative on rechecking and remained so. In the other four, the Hintons became positive, and after variable amounts of treatment became negative.

We feel that in this group there were only two cases which were not luetic. The remaining five were considered luetic, in spite of negative history and negative Wassermann reaction, because the Hinton test in each case showed positive reactions on rechecking and under anti-luetic treatment became negative in all but one case. In all these cases the neurological examinations were not remarkable.

The Hinton test in this group aided us in establishing the diagnosis of syphilis in five cases which undoubtedly would have been missed.

Group 5.

This group consists of two cases in which the first test showed negative Hinton and positive Wassermann reactions. In both instances the Hinton changed to positive. One gave a previous history of syphilis; the other did not. Both received treatment. In one the Wassermann became negative, while the Hinton remained positive; in the other both tests were negative.

In this small group the Hinton was not so accurate as the Wassermann on the first test.

Group 6.

This group consists of a single case which on admission early in 1929 showed a positive Wassermann reaction and a fading macular rash on the arms. In November, 1929, when the Hinton test was first used in this institution this patient showed a negative Hinton and a doubtful Wassermann reaction. However, on account of a previous history of syphilis, treatment was continued and the Hinton test became positive and remained so throughout the treatment, while the Wassermann reaction remained doubtful.

In this instance the initial Hinton test was not so accurate as the Wassermann.

Group 7.

This group consists of twenty-nine cases in which the first tests were both negative. Twenty-two cases gave a history of syphilis. The remaining seven were included in this group because, in spite of negative Wassermann and Hinton reactions on the initial test, on rechecking they showed changes in either the Wassermann or the Hinton reaction.

On rechecking several times, sixteen of the total group of twenty-nine patients continued to show negative reactions, in spite of a history of syphilis. These patients had had good treatment, or the syphilitic infection had occurred so many years ago that it had probably burned out. Four cases showed clinical signs suggestive of central nervous system lues. In these the lumbar punctures were entirely negative.

The Hinton and Wassermann tests of the thirteen remaining patients were inconsistent. These inconsistencies will be taken up in a later communication.

The Hinton test aided us as supplementary evidence in diagnosing cases of syphilis.

Group 8—Control Group.

This group consists of two hundred and fifty patients whose blood serology was continuously negative, and whose history showed no evidence of lues.

In this group, eighty-eight patients presented some clinical abnormality referable to the nervous system. In sixty-seven of these, however, the signs were slight, such as nystagmoid movements, hyperactive but equal reflexes, and slight pupillary anomalies—signs that may be found in any detailed examination in a large group of so-called normal individuals. But the remaining twenty-one revealed marked neurological signs. Several of these were due to arteriosclerosis with hypertension, and a few could be classified as multiple sclerosis. In eight there were suspicious indications of syphilis of the central nervous system. These eight had negative lumbar punctures.

This group of eight patients is too small a group from which to draw definite conclusions, but it is interesting to note that a negative Hinton test and the presence of signs suspicious of luetic involvement of the nervous system would indicate a negative spinal fluid. It is true that the Wassermann is also negative in this small group, but experience teaches us that the above dictum does not hold true with the Wassermann test.

The remaining one hundred and sixty-two cases showed no clinical evidence from either physical or neurological examination, and blood serology was consistently negative. Of these cases

only one lumbar puncture was done, as the patient stated she had been treated for syphilis.* Her entire neurological examination was negative.

Throughout the entire study we noted the accuracy of the Hinton test, but there were a few apparently false reactions, both positive and negative. However, on rechecking, the true Hinton reactions were obtained. A discussion of these false reactions has no bearing on the scope of this paper, but will be presented in a later communication.

*A letter from the hospital where treatment had been received stated that she had been treated for gonorrhea, and not for syphilis.

From the experience gained in this study, we conclude:

1. That the Hinton test was positive in more than twice as many cases of syphilis as the Wassermann, and therefore is a distinct aid in the diagnosis of syphilis.

2. That in treated cases the Hinton reaction remained positive longer than the Wassermann, indicating, as far as we could determine, continuation of treatment and therefore better management.

3. That a negative Hinton may be considered as a diagnostic aid in ruling out active syphilis of the central nervous system wherever suspicious signs are encountered.

COMPARISON OF DISEASE INCIDENCE IN CONNECTICUT WITH 1931 AND SEVEN YEAR AVERAGE

MONTH ENDING SEPTEMBER 17, 1932

	1932					1931			
Diseases	Week ending August 27	Week ending Sept. 3	Week ending Sept. 10	Week ending Sept. 17	Average cases reported for week corresponding to Sept. 17 for the past seven years	Week ending Aug. 29	Week ending Sept. 5	Week ending Sept. 12	Week ending Sept. 19
Anthrax	—	—	—	1	—	—	—	—	—
Cerebrospinal Men.	—	—	1	—	—	1	—	—	—
Chicken Pox	2	4	4	—	6	5	22	4	2
Conjunctivitis Inf.	—	—	1	—	—	—	—	—	—
Diphtheria	5	11	1	6	12	3	6	8	3
Encephalitis Epid.	—	—	—	—	—	—	1	—	—
German Measles	1	—	2	2	1	—	4	1	2
Influenza	1	—	—	3	3	—	2	3	1
Malaria	—	—	—	—	—	—	—	1	—
Measles	14	7	3	11	4	3	5	2	3
Mumps	8	3	10	17	7	20	5	1	3
Paratyphoid Fever	1	2	—	—	4	1	—	2	1
Pneumonia (Broncho)	8	7	4	7	12	7	8	11	9
Pneumonia (Lobar)	4	5	6	8	11	6	8	6	10
Poliomyelitis	1	3	2	—	24	134	162	92	101
Scarlet Fever	7	9	11	22	15	9	12	3	7
Septic Sore Throat	1	—	—	—	—	1	2	—	1
Tetanus	2	1	—	—	—	1	1	—	1
Tuberculosis (Pul.)	24	20	12	19	30	22	24	16	18
Tuberculosis (O. F.)	3	3	2	4	2	—	—	4	1
Typhoid Fever	—	2	2	2	5	9	2	7	8
Undulant Fever	1	—	—	—	—	1	—	—	—
Whooping Cough	44	37	45	46	37	67	53	51	57
Gonorrhea	26	22	38	31	32	42	36	30	29
Syphilis	25	23	32	31	27	47	69	21	30

Remarks: No cases of Asiatic cholera, glanders, plague, or yellow fever during the past seven years.

NEW ENGLAND SURGICAL SOCIETY

THE fifteenth annual meeting of the New England Surgical Society was held at Hartford, Connecticut on September 30 and October 1.

Under the Chairmanship of Dr. Edward R. Lampson an excellent program was arranged and carried out. On the first morning an operative clinic was presented by the Staff of the Hartford Hospital followed by a dry clinic at which the following cases were presented:

Two Cases of Carcinoma in Young Individuals. — H. G. Jarvis

1. Multiple Dermoids of Ovary.
2. Hysterectomy in Selected Cases of Cervical Cancer. — J. R. Miller

A Pathological Basis for the Treatment of Burns.
1. Scalds.
2. Electrical Contact Burns. — D. B. Wells

Adenocarcinoma of Thyroid — H. C. Clifton

1. Suture of Common Femoral Artery.
2. Removal of Thrombus from Common Iliac Artery. — A. W. Branon

Bilateral Congenital Dislocation of Hip. — Paul P. Swett

1. Regeneration of Bladder Following Subtotal Cystectomy. — T. N. Hepburn
2. Plastic on Bladder for Recto-vesico Vaginal Fistula.
3. Bilateral Uretero-Rectal Transplantation in a Case of Spina Bifida.

1. Adenomata of Pancreas and Adrenal. — A. M. Rowley
2. Bilateral Carcinoma of Adrenal. — W. M. Allen
3. Adenoma of the Adrenal.

1. Two Cases of Typhoid Abscess. — T. W. Worthen
   1—20 Years After the Systemic Infection.
   2—No History of Systemic Infection.
2. Pericardiolysis.

Demonstration of Roentgenological Cases. — D. J. Roberts

1. Aberrant Pancreas in the Stomach. — E. R. Lampson
2. Papilloma of the Stomach.

The members of the Society were guests of the Hartford Hospital at lunch.

In the afternoon the Scientific Session was held at the Hunt Memorial Building, the attractive and comfortable home of the Hartford Medical Society. The following papers were read:

1. **A Comparative Mortality Study of Acute Appendicitis.**
   Irving J. Walker, M.D., Boston.
2. **Appendiceal Abscess.**
   Donald S. Adams, M.D., Worcester, Mass.
3. **Operative Evacuation of the Small Intestine in Paralytic Stasis.**
   David Cheever, M.D., Boston.
4. **Bleeding Duodenal Ulcer.**
   Arthur W. Allen, M.D., Boston.
5. **Intrahepatic Cholelithiasis (with report of cases).**
   Michael F. Fallon, M.D., Worcester, Mass.
6. **Recurrent or Persistent Jaundice in Youth.**
   Willis E. Hartshorn, M.D., New Haven, Conn.
7. **Presentation of a Case of Transplantation of the Ureters into the Rectum Because of Carcinoma of the Bladder.**
   Herman C. Pitts, Providence, R. I.
8. **Post-operative Thrombophlebitis.**
   Ernest L. Hunt, M.D., Worcester, Mass.
9. **Report of a Case of Lingual Goitre.**
   Richard H. Miller, M.D., Boston.
10. **A Case of Intrathoracic Goitre.**
    Edward L. Young, Jr., M.D., Boston.

Members and their wives were entertained at tea by Dr. and Mrs. H. Gildersleeve Jarvis at their home.

The annual dinner was held at the Hartford Club in the evening. Dr. Edward R. Lampson presided and called upon the President, Dr. Frank H. Lahey, who delivered his Presidential Address entitled "Some Remarks on Medical Economics." He then introduced Judge Arthur F. Ells of the Supreme Judicial Court of Connecticut who gave a very interesting and unique talk which was very much enjoyed. There were about eighty-five members present.

Saturday morning the Scientific Session was resumed and the following papers were presented:

1. **The Treatment of Compound Fractures.**
   Paul P. Swett, M.D., Hartford, Conn.
2. **The Surgery of Chronic Arthritis.**
   Philip D. Wilson, M.D., and
   Robert B. Osgood, M.D., Boston.
3. **Traumatic Arthritis, So-Called.**
   Frederic J. Cotton, M.D., Boston.
4. **Changes in the Epiphyses, Secondary to Infection.**
   James W. Sever, M.D., Boston.
5. **The Treatment of Carcinoma of the Prostate.**
   George G. Smith, M.D., Boston.
6. **Psoas Abscess of Pyogenic Origin.**
   J. Dellinger Barney, M.D., Boston.
7. **Choice of Approach in Thoracotomy for Acute Suppurative Pericarditis.**
   Philemon E. Truesdale, M.D., Fall River, Mass.
8. **The Use of Tube Grafts for Cicatricial Contractions of the Neck.**
   Charles G. Mixter, M.D., Boston.
9. **Lipoma of the Uterus with Report of a Case.**
   Fred B. Lund, M.D., Boston.
10. **A Case of Gaucher's Disease in a Child.**
    David W. Parker, M.D., Manchester, N. H.

At the regular annual business meeting which followed, the officers for the ensuing year were elected:

President, Lyman Allen, M.D., Burlington, Vt.
Vice President, H. Gildersleeve Jarvis, M.D., Hartford, Conn.
Secretary, John M. Birnie, M.D., Springfield, Mass.
Treasurer, Peer P. Johnson, M.D., Beverly, Mass.
Recorder, Walter G. Phippen, M.D., Salem, Mass.

Executive Committee:
Lyman Allen, M.D., Burlington, Vt.
Philemon E. Truesdale, M.D., Fall River, Mass.
Lucius C. Kingman, M.D., Providence, R. I.
William H. Bradford, M.D., Portland, Me.
Thomas W. Luce, M.D., Portsmouth, N. H.

It was voted to hold the next meeting in Boston.

After the meeting adjourned luncheon was served and the members had an hour or so of social intercourse before leaving for their homes. The thanks of the Society are due the members from Hartford for another delightful meeting.

BERNARDO RAMAZZINI*

1633-1714

BY FRANCIS D. DONOGHUE, M.D.†

THE Sixth International Congress of Industrial Accidents and Occupational Diseases was held in Geneva from the third to the eighth of August, 1931.

The Permanent Committee on Occupational Diseases was presided over by Professor Luigi DeVoto, of Milano, who is one of the outstanding authorities of the world on occupational diseases. His importance among the Latin-speaking people is comparable with the standing and authority of Sir Thomas Oliver, of Newcastle-on-Tyne, who, as vice-president of the Permanent Committee, was also an imposing figure at this Congress.

As a preliminary to his inaugural thesis, Professor DeVoto devoted considerable time to the early work of another famous Italian who may well be called the father of the study of occupational diseases, — Bernardo Ramazzini. He spoke with some degree of feeling, declaring that the work of Ramazzini, while familiarly quoted by the European authors, had not received the attention in the United States that its importance had deserved, quoting several prominent American writers who did not even mention the early and fundamental work of this great Italian. Referring to the relationship between dust inhalation and disease which was recognized before and during the Middle Ages by various authors, mention was made of many writers who have said that Ramazzini was the first after Paracelsus to call attention to such conditions as stone-mason's and miner's phthisis. In this, they have overlooked the work of Georgius Agricola, published in 1555, with the title "De re Metallica," which has been made familiar to the English-speaking world through a translation that appeared in London in 1912. This really monumental and valuable work, so often quoted, was made by Herbert C. Hoover and Lou Henry Hoover. President Hoover's interest in the diseases of industry seems to be of long standing. In this work, reference is made to the dust in mining industries producing asthma and leading to the development of consumption. This, during 180 years, was an authoritative work, and was not superseded as a textbook (from the mining standpoint) until the book by Schülters in 1758.

Bernardo R. ---ini
1633—1714.

(This picture of Ramazzini is from the work of Dr. Franz Kolsch.)
Stuttgart, 1912.

Georgius Agricola deserves more than a passing word; he was born, according to President Hoover's translation, in Saxony in 1494, his original name being Georg Bauer (peasant), which was Latinized into Georgius Agricola.

His observations upon the things pertaining to mining were made incidental to his work as a physician, for in 1526 he was chosen Town

*Read before the Boston Medical History Club, March 21, 1932.

†Donoghue — Medical Adviser, Massachusetts Department of Industrial Accidents, 1914-1932. For record and address of author see "This Week's Issue," page 716.

Physician at Joachimstal, still a great mining district and familiar to us now as the great home of radium, its waters and its emanations. In 1533 he was chosen City Physician at Chemnitz, and lived there from 1533 until 1555. He was a Catholic in a Protestant community and was supported by a Protestant ruler in his work. Up to Agricola's time there were sixty minerals known, to which he added bismuth and antimony.

I quote from Book 6, page 214, a very early reference to miner's consumption:

> "It remains for me to speak of ailments and accidents of miners and a method by which they can guard against these. Of the illnesses, some affect the joints, some attack the lungs, some the eyes, and finally some are fatal to men.
>
> "Where water in the shafts is abundant and very cold, it frequently injures the limbs, for cold is harmful to the sinews.
>
> "In dry mines, the dust penetrates into the windpipe and lungs and produces difficulty in breathing and the disease that the Greeks call 'asthma'. If the dust has corrosive qualities, it eats away the lungs and implants consumption in the body.
>
> "Cobalt, probably arsenical, eats away the feet of the workmen and similarly, their hands, their lungs and their eyes."

What he had to say on the affections of the skin will interest my friend Dr. Prosser White:

> "Pomphlox, which was a furnace deposit of zinc oxide or arsenical oxide, makes ulcers that eat to the bone."

As prophylaxis for these he advocated "rawhide boots, long gloves for the hands and arms and veils to protect the face and respiratory passages. . . ."

Again he says, "there are fumes from mines. Sometimes the miners die suddenly without pain and if they are rescued, they are pale and look like dead men".

The recognition of occupational diseases as such is a fairly recent development, and it closely followed the enactment of workmen's compensation laws, such as the law of Massachusetts, which recognizes injuries arising out of and in the course of the employment. This was a great advance from the Employers' Liability laws of England and America, which recognized only injury by accident and then in but a limited way.

Sir Thomas Oliver, in the work on "Dangerous Trades," 1902, emphasized the need of observation and study of this great group of occupational hazards.

Beginning at the time injury was construed by the Industrial Accident Board of Massachusetts and later, by our Supreme Court, to mean injury by disease or poisoning, there has been a great change in the literature.

Thanks to Mr. James F. Ballard, Director of the Boston Medical Library, I have been able to make a search covering not only the work of Ramazzini, but also references to Ramazzini as they have appeared in American literature. The result of this work I am submitting to you, that Ramazzini may be given further and proper credit.

It seems to be agreed that the first systematic treatise on Diseases of Occupation, entitled, "De Morbis Artificium Diatriba," was written by Professor Bernardo Ramazzini of the University of Padua, in Italy, in 1690, but was not published until 1700. Ramazzini was born in Cappi, near Modena in Northern Italy, November 5, 1633, and died on his eighty-first birthday in 1714. He received his doctor's diploma at the age of 26, and practiced medicine for several years in his native town. In 1671 at the age of 38, he removed to Modena and became connected with the University in 1682. In 1685, he began to publish a series of articles on medicine and hygiene which, according to Garrison, opened up an entirely new department of modern medicine, the diseases and hygiene of occupations. The author emphasized in his introduction the importance of industrial hygiene and the need for the physician to inquire into the occupation of the patient. He described very accurately the processes of various industries and occupations, the injurious influences and special diseases of the various trades.

Ramazzini's book was translated into English in 1705, and also into French in 1711, and for over a century was the only textbook on this subject. According to Lehmann, there were not less than 25 editions and translations of this pioneer text which, in the course of time, was greatly improved by additions and also by eliminations of numerous digressions. Among the best revisions of the book are those by Ackermann in 1783, and Patissier in 1822 in his "Traite des maladies des artisans et de celles qui resultant des diverses professions," Paris, 1822.

With the newer conception of workmen's compensation and the restriction of immigration, the work of Ramazzini became the ground work for the splendid development of safety in industry movements. The growth of its importance in the United States of America may be shown by the space devoted to Ramazzini by Kober and Hanson, whose textbook, "Diseases of Occupation and Vocational Hygiene" of 1916 devoted four lines to him, while the successor to this work, a book by Kober and Hayhurst, Philadelphia, 1924, gave forty lines to the work of Ramazzini. One of the most elaborate references to Ramazzini and his work is found stowed away in the American Encyclopedia and Dictionary of Ophthalmology, edited by Colonel Casey L. Wood in 1919. This devotes thirteen pages to the work of Ramazzini. This abstract calls attention not only to the general diseases, which I will take up later, but to "the diseases of

those who work on minute things which strain the eyes". He says, "there are some tradesmen employed in the finer and smaller sort of workmanship, such as goldsmiths, watchmakers, painters, I mean those who paint upon jewels, and writers, such as he who wrote Homer's Iliads in the compass of a nut-shell".

Thompson's "Occupational Diseases" says: "The study of occupational diseases is no new subject, and two centuries ago Bernardino Ramazzini published a treatise in Padua, Italy, on tradesmen's diseases entitled 'De Morbis Artificium Diatriba,' 1713."

In 1929, F. H. Garrison's "Introduction to the History of Medicine," 4th edition, Philadelphia, page 319, recognizes Ramazzini as follows:

> "With Haller, the systematist, we may class the works of a group of original men, beginning with De morbis artificium diatriba (Modena, 1700) of Bernardino Ramazzini (1633-1714), which opened up an entirely new department of modern medicine, viz., trade diseases and industrial hygiene. Ramazzini was the first after Paracelsus to call attention to such conditions as stone-mason's and miner's phthisis (pneumonokoniosis), the vertigo and sciatica of potters, the eye-troubles of gilders, printers and other occupations. He was a good epidemiologist, and described the outbreak of lathyrism at Modena in 1690, the malarial epidemics of the region, and the Paduan cattle-plague of 1712. Like most clinicians of his time, he made observations of the weather (Ephemerides barometricoe, 1710). Italy has done eponymic honor to his memory in the medical periodical which bears his name."

There are many other American works, such as Rosenau's "Preventive Medicine and Hygiene," which do not mention Ramazzini, but these books were not written from the historical standpoint and this adequately accounts for the omission. In Dr. Thomas M. Legg's Lowell Institute lecture in Boston, November 24, 1919, on the subject of "Industrial Diseases under Medieval Trade Guilds," he made many references to Ramazzini. This lecture appeared in the *Journal of Industrial Hygiene*, February, 1920.

The translation of this great Italian's work, most familiar to us, was made by R. James, M.D., of London, second edition, 1750. Its title-page reads:

> "On the diseases of artificers, which by their particular callings they are most liable to. With the method of avoiding them and their cure. By Bern. Ramazzini, M.D., Chief Professor of Physic at Padua."

Ramazzini, in the introduction to his work, makes several interesting observations which carry the same lessons in 1932 that they did in 1692, as follows:

> "We must own that some Arts entail no small mischief upon the respective artisans, and that the same means by which they support Life, and maintain their Families, are oftentimes the cause of grievous Distempers, which hurry them out of the World. Now, having observed this frequently in the course of my practice, I bent all my thoughts upon writing a Treatise of the Diseases of Tradesmen and Artificers. It is certain we owe this Piece of Service to the miserable condition of Tradesmen, whose Professions even if the meanest and most sordid kind, are so advantageous and necessary to mankind. This debt, I say, is due from medicine, the noblest of all sciences, as Hippocrates calls it, which gives Relief to the Poor, and dispenses cures gratis.
>
> "We cannot but be sensible that the mechanic Arts have contributed very much towards the civilizing of mankind. And, accordingly, we find it recorded in various monuments of antiquity that the Founders of great cities and Kingdoms took a particular Care of Workmen and Tradesmen. For they instituted colleges and societies of artificers.
>
> "Plutarch informs us that Numa Pompilius was much admired and valued for dividing artists according to their respective trades; so that the Musicians, for instance, were in one class of company, the Goldsmiths in another, and so Architects, Dyers, Shoemakers, Blacksmiths and others.
>
> "We read likewise in Livy, that in the consulship of Appius Claudius and P. Servilius, they instituted a college or company of merchants, under the Title of Mercurials, so-called, because they worshipped Mercury as the President of Merchandise.
>
> "And Plato, in his book de legibus, says, Tradesmen are consecrated to Vulcan and Minerva, *Two Deities who work hard.*
>
> "Now, since both antiquity and the Age we now live in, show Laws in all well-governed Cities, calculated for the good Order and Reputation of Tradesmen, it is but reasonable that medicine should contribute its share.
>
> "For my own share, I have done what I was able to do, and thought it no indecency to step sometimes into the meaner sort of Workhouse, and view the Secrets of Mechanic Arts; especially now that almost Physic is reduced to Mechanism, and the schools sound of nothing so much as the automaton, or machine of the body."

Of the Attitude of the Physician, we read:

> "When a physician is called to visit one of the meaner sort of people I would advise him not to feel the pulse as soon as he comes into a room without inquiring into the circumstances of the patient, nor to stand, as it were, in a transient posture to prescribe, where the life of a man is concerned; but to sit down by the patient, let the place be never so sorry, and carefully interrogate him upon such things as both the precepts of our Art and the offices of humanity require us to know.
>
> "The Divine Hippocrates informs us, that when a physician visits a patient, he ought to inquire into many things, by putting questions to the patient and the bystanders. You must ask, says he, what uneasiness he is under, what was the cause of it, how

many days he has been ill, how his belly is affected and what food he eats.

"To which I would presume to add one interrogation more; namely, what trade he is of. For though this question may be referred to the morbific causes, yet I reckon it absolutely necessary when we have to do with vulgar ordinary patients. But I find it very seldom minded in the common course of practice, or if the physician know it without asking he takes but little notice of it. . . . So I choose to publish this Treatise of mine for the good of the Republic, or at least for the benefit of Tradesmen."

Ramazzini's work consists in the consideration of the dangers of forty-three occupations, beginning in Chapter 1 with the Diseases of Metal Diggers, and ending with the Diseases of Learned Men. These I will run over briefly, giving the especial subject in each chapter.

It is evident that Ramazzini was familiar with the work of Agricola, for in Chapter 1, under "Diseases of Metal Diggers," he quotes Agricola and also he quotes him as to further dangers than those I have mentioned above, as follows:

"Hence, it is, that those who dig minerals in the mines are but short-lived; and the women who marry them have the opportunity of matching with several husbands; for Agricola asserts that near the mines of the Carpathian Mountains, women have been known to marry seven husbands."

Ramazzini has also this to say about mines:

"In those places where there are mines, to dig in them was anciently and is still reckoned a sort of punishment to be inflicted on criminals; and accordingly, we learn from Galonius that in ancient times the Christians were usually Damnati Ad Mettila, condemned to dig in the mines. No exhalation is so absolutely pernicious to them, as that that breaks forth from the quick silver mines, for Fallopius assures us that in the quick silver mines, scarce any of the workmen reach the third year."

Chapter 2 treats of Diseases of Gilders or Those Who Work in Gilt.

"It is well known that dismal calamities are inflicted by quick silver on goldsmiths as this gilding cannot be performed without amalgamation so that when they afterwards dislodge this mercury by fire, though they turn away their faces, they cannot possibly avoid receiving some poisonous steams at the mouth, and accordingly we find that this sort of workmen quickly become asthmatic, paralytic and liable to vertigo. Their necks and hands tremble and their teeth fall out and their legs are weak and afflicted with scurvy."

Chapter 3 discusses the diseases of surgeons and others employing frictions and unctions in venereal cases, and says that Fallopius, in his treatise on the pox, tells us that Jacobius Carpensus got about 50,000 ducats of gold only by curing the pox with an unction.

Chapter 4 is devoted to the diseases of chemists.

In Chapter 5, Diseases of Potters, he says:

"Now the potters make use of burnt and calcined lead for glazing their ware; and for that end grind their lead in marble vessels and so their hands begin to shake and soon they become paralytic, lethargic, cachectic and toothless. In fine, we scarcely see a potter that has not a leaden cadaverous complexion."

Chapter 6, on those who work in copper and tin, says:

"As for those who work in tin and copper, they are usually attacked with the same symptoms as the melters and grinders of lead with the same result as potters, for tin bears a great resemblance to lead."

In Chapter 7, Diseases of Glassmakers and Glassgrinders, we find:

"In addition to the poisoning, we are dealing with heat. . . . But far greater misfortunes attend those who make the colored glasses for bracelets and ordinary women's ornaments. They cannot color the crystal without using borax calcined and antimony, all of which they reduce to powder and mix it with the glass in order to make a paste. This is a doing where, though they turn away their faces, they cannot avoid receiving noxious exhalations at the mouth. Nay, it oftentimes turns out they fall down dead or are suffocated or are afflicted with ulcers of the mouth or gullet or windpipe and at last die with ulcers of their lungs. . . . Those who make looking glasses, especially at Venice, are exposed as much as gilders to the noxious menace of mercury."

Chapter 8 discusses Diseases of Painters.

"Painters are also usually subjected to various disorders, such as the trembling of the joints, a cachexy, a blackness of the teeth, a discolored complexion, melancholy and a loss of smelling. . . . It is said of Antonius di Allegris, commonly called Carregio, that he was melancholic and even stupid, that he had no sense of the value and excellencies, either of his self or of his pieces, in so much that he returned to his admirers the rewards they sent him as if they had been mistaken in giving a great price for those pictures which are now above any price whatever."

He further observes:

"All the world knows that cinnibar is the off-spring of mercury, ceruse is made of lead, verdigrease of copper, and the ultramarine from silver. Therefore painters must be liable to the same distempers as the workmen who work in metal."

He calls attention to the danger of using the fingers to wipe the pencil (brush) and also the danger of sucking the pencil to make it clean.

In Chapter 9, treating of the diseases of such as work upon brimstone, he says:

"Those who use sulphur melted or kindled brimstone suffer shortness of breath,

> hoarseness and running of the eyes. . . . The story of the adulteress is well known, who, on her husband's approach, hid her gallant under the bed and covered him with a cloth which had brimstone upon it. It was forthwith betrayed, as her gallant was so struck with the brimstone that he could not forbear sneezing and coughing aloud."

Chapter 10 takes up Diseases of Blacksmiths.

> "Daily experience vouches that blacksmiths are likewise blear-eyed; which, as I imagine, is not so much owing to the violence of the fire on which their eyes are almost always fixed as on the sulphur effluvia from the hot iron that strike and twitch the membranes of the eyes."

Chapter 11 covers diseases of such as work in lime and plaster of Paris:

> "It is no wonder particles of the plaster conveyed through the trachea to the receptacles of breath and there blended with the serum that oozes from the glands should produce such pernicious effects. . . . Lime makes the hands of brick layers wrinkle and sometimes ulcerates them but frees them from the scab, and for that reason is justly recommended as a treatment for that disorder, being qualified by its alkaline virtue to subdue the acid of the itch."

Here again Ramazzini anticipated the modern view of occupational dermatitis in cement workers.

At the last International Congress in Geneva, attention was called by Dr. E. Agasse-Lafont, Paris, to the harmful action of cement and especially of certain types of artificial stones and, in particular, their toxic, infectious, caustic and mechanical effects. This is due to the colorings, the use of lead, arsenic, mercury, chromates, and all organic colorings, bioxide of manganese, chloride of barium, etc. They also have gases in the product,—carbon monoxide and sulphurated gases. While the cement industry can boast that its processes are practically harmless, the artificial stone industry opens up the possibility of new causes of damage due to the use of toxic substances.

Chapter 16 deals with diseases incident to oilmen, tanners and other such trade.

> "The same is the case of tanners and leather-dressers, who steep the hides of animals in pits with lime and galls: and not only so, but tread them with their feet, wash and cleanse them, and smear them with tallow."

Chapter 17 takes up the diseases of tobacconists and those who make snuff, while Chapter 18 discusses the diseases of the bearers of corpses,—undertakers.

Chapters 19 and 20, diseases of midwives and nurses. He quotes Fernelius, admiring the force of contagious diseases, and relates the case of a midwife who, by laying a woman, contracted such a disorder in her hand that it corrupted and fell off, adding that the woman she had laid was poxed. So that, he says, "a nurse who suckles a foul child receives the first infection in the breasts; and a child who sucks a pocky nurse discovers the first seed of a pox in the mouth and the palate; so that this midwife felt the dire effects of the contagion in the hand upon which the pocky lochia dropped".

Chapter 21, the diseases incident to vintners and brewers, we find to be diseases following closely those with which we were familiar before the Volstead Act came into effect.

In Chapter 22 we read of the diseases of bakers and millers, and in Chapter 23 of those of starch-makers. He says they are subject to asthma and diseases of the lung passages.

> "These men do their work commonly in hot places, especially in winter, to promote fermentations of the bread, and so, having occasion when their work is over, to go from places of extreme heat to the open air, readily are seized with diseases of the breast, such as pleurisies and peri-pneumonias."

He also notes that "the hands of bakers are swelled and pained, and it is indeed observable that all of them have very large thick hands". Again, he says "both millers and bakers require the same method of cure when the disorder takes the rise from the volatile flour sucked in at the mouth". Further, "if they are seized with ruptures upon carrying heavy burdens, let them wear trusses; and indeed, I usually advise them to wear trusses likewise by way of prevention".

In Chapters 24 and 25, we find that the diseases of stonecutters, masons and bricklayers are similar to those we know at the present time. His idea on prevention is,

> "Now I do not see how they can avoid these effluvia, unless it be by covering their mouths and nostrils with a napkin, that thus the dusty particles may be sucked in in smaller quantity."

In Chapter 26, we read of the diseases of laundresses and washerwomen; in Chapter 27, of those who sift and meter corn; in Chapter 28, of those who pick flax, hemp and silk; in Chapter 30, diseases of fishermen and mariners; and in Chapter 31, diseases of those who work in salt pits come under his observation.

Chapter 32 discusses the diseases of such who stand when they are at work, and says:

> "In general, those who stand at work are subject chiefly to varices or swelling in the veins, for the tonic motion of the muscles retards the motion of the blood, upon which it stagnates in the veins and vessels of the legs."

Chapter 33 is devoted to the diseases of tradesmen who sit much. Of tailors he says that "being obliged to clap their feet to their thighs when they work," they are "often troubled with numbness in the legs, a lameness and sciatica".

Chapter 34 is about racial diseases; Chapter 35, diseases of couriers or runners. "They are very apt to be troubled with ruptures, for the forcible keeping in of the air breaks or dissolves the peritoneum."

Chapter 36 takes up the diseases of horse-coursers or grooms. We are supplanting these now with the diseases of chauffeurs,—ankles and knees.

Chapter 37 deals with diseases of porters; Chapter 38, with those of wrestlers; Chapter 39, with the diseases of those who work upon minute things that strain the eyes. The need of good lighting and the need of spectacles at work are two points brought out in this chapter.

In Chapter 40, on diseases of music masters and singers, he says:

> "These men used generally to be subject to ruptures, unless they be eunuchs; for, by prolonging and confining the expiration of the air, in forming their voice or making rehearsals, both the muscles of the abdomen subservient to respiration and the peritoneum, contract a laxity, upon which a rupture in the groin readily ensues, just as we see over-crying and bawling make tumors in the groins of children."

In Chapter 41, we read of the diseases of husbandmen. This is a great group of diseases still not properly recognized by compensation laws. Chapter 42 discusses diseases usual in camps.

And with a word of caution the book closes:

> (Chapter 43) "The Professors of Learning ought therefore to pursue the study of wisdom with moderation and conduct, and not to be so eager upon the improvement of their minds as to neglect the body. They ought to keep an even balance, so that the Soul and Body may like landlord and guest observe the due measures of hospitality, and do mutual offices, and not trample one another under foot."

Ramazzini's pharmacology and his pathology seem crude and out of date now, but when we consider his power of observation and the clinical application of what he saw, is there not a lesson to be learned by the modern school of medicine which seems at times to ignore the importance of human contact and the reactions of human beings?

COMMERCIALISM VS. PROFESSIONALISM

Under this title the *Journal of the Medical Society of New Jersey* relates the story of "One of the large manufacturers of a product extensively prescribed by practicing physicians, and extensively used for that reason, was, it seems, told by the representative of a powerful drug chain organization that it must make certain concessions to 'modern merchandising methods', or else ——. The first thing wanted was an extra discount. This was needed in order that the products in question might be advertised to the public. The advertising was deemed necessary in the interest of both the manufacturer and the chain organization which proposed to handle the products in question. The answer of the manufacturer was that he did not desire to advertise his products to the public. He prided himself that he advertised only to the medical profession. He felt that the public had no business prescribing for itself, even such a good product as he made.

"The retailer urged that goods such as those in question could be sold in larger quantities by displaying them in windows, advertising them in newspapers, and by the recommendation of clerks. The manufacturer did not want any of those procedures followed."

Such occurrences are an old story to ethical manufacturers, although the practicing physician doubtless is not aware of how much pressure is thus brought to bear.

PARROT FEVER WARNING ISSUED BY PUBLIC HEALTH SERVICE

The United States Public Health Service advises all persons to avoid contact with recently shipped or acquired birds of the parrot family. Several cases of psittacosis, or parrot fever, are being reported in various parts of the United States. Reports of 5 cases and one fatality have recently been received from Minneapolis, Minn. Another case has been reported from Boise, Idaho. There have been 12 cases of parrot fever, with 6 deaths, reported in California between December 1, 1931, and February 10, 1932.

Upon the recommendation of the Public Health Service, the Secretary of the Treasury has recently issued an order amending the interstate quarantine regulations so as to limit the interstate transportation of birds of the parrot family by common carriers to those certified by the proper health authority of the State as coming from aviaries free from infection.

A medical officer of the Public Health Service at the invitation of the California State Department of Public Health, within the recent past made a careful study of the situation in California with reference to parrot fever infection and the breeding of birds of the parrot family in that state. Conclusive evidence was thus obtained which indicates that psittacosis, or parrot fever infection is present in some of the breeding aviaries of Southern California. Parrots and parrakeets from this source have probably been one of the important means of spreading the disease to other states. The cases occurring in Minneapolis and Boise were traced to California birds as well as previous cases this year reported from New York City and Oregon.

An outbreak of psittacosis or parrot fever occurred in the United States during the Winter of 1929-1930. One hundred and sixty-three cases were reported at that time, with 33 deaths. Practically all of these cases were traced to association with recently acquired parrots and parrakeets.

MEDICAL PROGRESS

PROGRESS IN PSYCHIATRY FOR 1931

BY KARL M. BOWMAN, M.D.*

A NUMBER of events of importance have occurred in the psychiatric field during the past year.

Changes in the National Committee for Mental Hygiene may be briefly mentioned: Dr. Frankwood E. Williams, who for nine years has been the Medical Director, retired from office on January 1, 1931, and was succeeded by Dr. C. N. Hincks of Montreal, Canada, who assumed the title of General Director. Dr. Hincks is a Canadian by birth, a graduate of the University of Toronto where he also received his M.D. in 1907. He was largely instrumental in founding the Canadian National Committee for Mental Hygiene in 1918. He was Secretary for this organization until 1924 when he became Medical Director.

Dr. Williams continued as Editor of *Mental Hygiene*, but resigned this position at the end of 1931 to be succeeded by Dr. Hincks.

A change has also occurred in the *American Journal of Psychiatry*. In June, 1931, Dr. Edward N. Brush resigned his editorship after 41 years of service, during 27 of which he was the Editor-in-Chief. He was succeeded by Dr. Clarence B. Farrar, Professor of Psychiatry at the University of Toronto, Ontario, Canada.

On January 10, 1931 the New York Academy of Medicine was presented with a fund of $100,000 for establishing the Thomas W. Salmon Memorial Lectures. Dr. Salmon had been Medical Director of the National Committee for Mental Hygiene and Professor of Psychiatry at the College of Physicians and Surgeons at Columbia University. It was planned to make these lectures an annual affair and to have them deal with some problem of psychiatry and mental hygiene. Dr. Adolf Meyer, Professor of Psychiatry at Johns Hopkins Medical School was chosen to give the first lectures in New York City some time during the year 1932.

The report of the Committee on the Medical Aspect of Crime which appears as a part of the report of the National Crime Commission is of special interest to psychiatrists, but of general interest to all physicians as well. A number of Massachusetts men were on this committee, including Dr. Sheldon Glueck, Assistant Professor of Criminology at Harvard Law School, and Dr. Winfred Overholser, Director of Division for Examination of Prisoners of the Massachusetts Department of Mental Diseases. There were also special committees from the American Medical Association, the American Psychiatric Association and the American Bar Association which aided in this report. The problem of expert testimony received careful consideration and methods for improving the present state of affairs were discussed. The Committee found only one of the many suggested remedies which seemed of value, namely the so-called Briggs Law of Massachusetts which provides for the psychiatric examination of any person indicted by the Grand Jury for a capital offense, or any person known to be indicted for any offense more than once or to have been previously convicted of a felony who is indicted by a Grand Jury or bound over for trial in the Supreme Court. This law secures a mental examination of the person by expert, unbiased examiners, and has largely done away with the so-called battles of experts which have been regarded by physicians generally as undesirable and harmful to the reputation of the medical profession. The principle of the indeterminate sentence was upheld by this Committee, and the establishment of Psychiatric Clinics in connection with the courts and attempts at a greater degree of classification of the various types of offenses, together with segregation of the different groups, and different methods of treatment for each group were recommended.

The Meeting of the Association for Research in Nervous and Mental Diseases was held December 27 and 28, 1931 in New York City. The topics considered by this Association were Encephalitis and Meningitis, and were rather more neurological than psychiatric. However, there appeared during 1931 three volumes of the proceedings of this Association; Vol. 10 on Schizophrenia which supplements Vol. 5 on this same subject; Also Vol. 11 on the Manic Depressive Psychoses, and Vol. 7 on Epilepsy. No brief review could do justice to these volumes, and it can merely be pointed out that anyone wishing to be familiar with the latest material on any of these three subjects will find these volumes full of valuable articles. Many of these articles have also appeared in the current medical journals.

The American Medical Association has shown itself more aware of the importance of psychiatry and has become more interested in the problem of the hospital for mental diseases and of the relationship of the psychiatrist to the rest of medicine. This has resulted in the appointment of a Committee from the American Medical Association to study these matters. After some preliminary work it has been agreed to carry on such an investigation together with the American Psychiatric Association.

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One very important step in this direction has been the appointment by the National Committee for Mental Hygiene of a new Division of Psychiatric Education. This Division is under the immediate direction of Dr. Ralph A. Noble of Sydney, Australia, with the assistance of Dr. Franklin G. Ebaugh, Professor of Psychiatry at the University of Colorado Medical School. At present a careful study of the courses in psychiatry at the different medical schools of this country is being made. The purpose of this Division is given as follows: "The main objectives of the program will be to work out further schemes for recruiting and training psychiatric and mental hygiene personnel; to secure more qualified candidates for psychiatric and mental hygiene work; to appraise and to assist in the development and improvement of existing educational facilities; to study the programs at present being followed in the teaching of undergraduates and graduates in medical schools; to administer fellowships; and to assist in placing trained personnel in university, hospital, and community mental hygiene work."

With the large amount of material being written, it is difficult to select that which is most important, and it would seem that the subject could best be presented by taking up specific topics, pointing out new discoveries and facts of interest, and mentioning some of the important articles dealing with each particular subject.

It has been mentioned that the increasing interest in psychiatry has led to special studies concerning the relationship of the psychiatrist to general medicine and the problem of teaching psychiatry. In the *Journal of Nervous and Mental Diseases* for April, 1931, Dr. Franklin G. Ebaugh presents a paper entitled, "Some Present Day Trends in the Teaching of Psychiatry." This paper was based upon the replies to a questionnaire sent to 66 Class A medical schools in this country. Replies were received from 22 of these schools. In general they indicate that more time was being devoted to the teaching of psychiatry, that more adequate instruction was being given, and that on the whole there was marked improvement. However, Dr. Ebaugh points out that apparently two medical schools make no provision for teaching psychiatry, and 29 make quite inadequate provision. The latter part of the article is devoted to a discussion of the teaching of psychiatry at the University of Colorado Medical School. According to Dr. Ebaugh the teaching of psychiatry should be combined with the teaching of other branches of medicine, and he hopes ultimately to see a greater part of psychiatric teaching given in connection with the work of other departments.

A second article by the same author, entitled "What Constitutes Fellowship Training in Psychiatry: Some Fundamentals" appearing in the October, 1931 issue of *Mental Hygiene* gives a discussion of the essentials of a two-year fellowship training. Ebaugh concludes that the fellows should work as an integral part of the hospital staff; they should have both ward and outpatient responsibilities under supervision. In the Out-Patient Department they should have some special work in Child Guidance. Opportunity should be given for clinical research, for participation in teaching work, and for associated work with other departments of the medical school. Some training in criminology should be given. Each fellow should familiarize himself with the psychiatric literature. On this basis Ebaugh feels that three years further training or experience will be necessary before the fellow will really qualify as a trained psychiatrist.

In the *Archives for Neurology and Psychiatry* for January, 1931, Adolf Meyer writes on Orientations of the Training and Practice in Neurology and Psychiatry. He feels that there must be more recognition of the field of the psychiatrist, and that ideally, psychiatry, neurology and mental hygiene should form a special group, but with independent departments, and with a general relationship to all of the other departments of medicine.

In the *American Journal of Orthopsychiatry* for July, 1931, Franklin C. McLean writes on the Training of the Psychiatrist—A University Department of Psychiatry. McLean feels that psychiatry is no longer confined to medicine but has a much broader field. He suggests that psychiatry be a university subject rather than limited to a medical school, and that there should be a University Department of Psychiatry. This article of McLean's hardly represents the viewpoint of most psychiatrists, and it is perhaps proper to remark that McLean, himself, is not a psychiatrist.

Concerning more specific work done in psychiatry, it may be said that no particularly new or startling discoveries have been made during the past year. In associated branches, such as nervous physiology, certain work has been done which may be of great importance to psychiatry such as the work on the action currents in the brain and nervous system. Further articles have appeared concerning the treatment of general paresis by malaria and by diathermy. In general, these articles confirm the value of these methods of treatment. It does not appear that diathermy is likely to supplant malaria, although there may be worked out definite indications as to which type of treatment will be preferable in selected cases.

In the *American Journal of Psychiatry* for November, 1931, Hinsie and Blalock in an article entitled "Treatment of General Paralysis" report the results in 197 cases treated from 1923-1926. One hundred and five cases were treated by malaria; 22 showed remissions, 20 were im-

proved, 17 unimproved and 46 died. Sixty patients were treated by tryparsamide and mercury salicylate; 17 had remissions, 8 improved, eight were unimproved and 27 died. Thirty-two cases were treated with combined malaria and tryparsamide; five showed remissions, seven improved, fourteen were unimproved and six died. The sex differences were regarded as important. There were 125 men and 72 women. Out of the total number treated, 20 per cent of females showed remissions as against 18 per cent of males. The figures for improved and unimproved were practically the same for both sexes. Forty-three per cent of males died under treatment as compared with 35 per cent of females.

Radiothermic Treatment of General Paresis, by Hinsie and Carpenter, in the *Psychiatric Quarterly* for April, 1931, is a preliminary report of the use of radiothermic treatment in 17 cases of general paresis. The authors attempt to produce a fever curve which would simulate that of inoculated malaria. As a result of such treatment, 11 cases left the hospital definitely improved, five were still in hospital, and one patient died.

The use of sodium amytal and carbon dioxide in the treatment of stupors, particularly the catatonic stupor, has received increasing attention. It seems to be generally agreed that temporary improvement may be produced in selected cases by either of these methods of treatment, but there is little evidence that such methods of treatment are to be looked upon as cures. More and more, it is being pointed out that psychological factors likewise need consideration and that the use of sodium amytal or carbon dioxide as aids in securing rapport with the patient, and as a part of the treatment will have an important place, but that it will only be one part of the total treatment. There is no evidence that a specific cure for stupor is to be found in either of these treatments. It is important to realize this fact as articles have appeared in the popular press stating that such a cure has been discovered.

In the *American Journal of Psychiatry* for March, 1931, Solomon, Kaufman and d'Elseaux report on Some Effects of the Inhalation of Carbon Dioxide and Oxygen, and of Intravenous Sodium Amytal on Certain Neuropsychiatric Conditions. In this article the authors present certain cases which were treated by these methods and report the results of such treatment. They feel that there are somewhat variable reactions in different types of cases, that the so-called benign or toxic infectious stupors show the best response, whereas, in long-standing cases of schizophrenia the patients never come back to what would be considered a normal level. There is some discussion as to how the effects are produced by such treatment.

Treatment of Stupor, by Lagenstrass, in the *American Journal of Psychiatry* for November, 1931, discusses the treatment of 12 catatonic stupors by means of the carbon dioxide oxygen method over a period of two years. Two patients responded well to the treatment for a period of one week and then gradually returned to their stuporous state. Five showed only a brief period of a few minutes of improvement. In these cases no permanent improvement was obtained. Four patients, however, responded well to treatment and have continued free of symptoms for many months.

The author feels that this method is of definite value. It was, however, noted that other methods of treatment were utilized besides the use of the carbon dioxide oxygen method. Psychotherapy was used quite intensively. Streptococcus vaccine was also used in producing a febrile reaction prior to the use of the carbon dioxide oxygen treatment.

Although considerable work has been done on the endocrines and their relationship to mental disorders there has been no significant discovery along these lines during the past year.

The problem of heredity in relation to mental disease and mental defect has continued to receive considerable attention. One interesting discussion has been as to whether mental disease and mental defect are to be regarded as due to a single change in the germ plasm. In *Mental Hygiene* for January, 1931, E. N. East in an article on "The Inheritance of Mental Characteristics" seems to regard feeblemindedness as due to the defect of a single gene. He uses as the data for reaching this conclusion the records of Goddard in his book on feeblemindedness. This idea of feeblemindedness as being due to the defect of a single gene is attacked by Paul Popenoe in the July, 1931 issue of *Mental Hygiene* in an article entitled, "Heredity and Mental Deficiency." Popenoe points out that feeblemindedness is a social and not a biological concept, and that any studies made on such a basis can have but little value. He insists that to classify persons as feebleminded or normal is quite unscientific. Popenoe points out that Jennings has gone so far as to regard feeblemindedness as due to a defect of a single gene and that he even refers casually to insanity as "a single sharply defined pathological trait". Popenoe insists that both Jennings and East are wrong in such assumptions. He then proceeds to analyze other material in the manner in which East has done, and draws quite different conclusions. He also criticizes the way in which East has handled his material. It may be added that nothing has appeared during the past year to solve the difficult problem of heredity in relation to mental disease and defect.

There has been increasing interest shown in the Rorschach test.This test, devised by Herman Rorschach, a Swiss psychiatrist, in 1921, con-

sists of a series of 10 symmetrical ink blot designs, some black and some in colors. The patient is asked to look at the cards and simply tell what he sees. More and more it is being felt that this method is one of the most valuable we have for studying personality, and further articles are appearing on the subject. An interesting article entitled "The Rorschach Test in Problem Children" by Samuel J. Beck appears in the *American Journal of Orthopsychiatry* for October, 1931.

Articles on Mental Hygiene and specific problems of adjustment of children are too numerous to mention. In general, these articles emphasize what has already been said and develop still further the current ideas.

Four articles appear worth mentioning: A brief article by Ray Lyman Wilbur, entitled "Mental Health as a National Problem" appearing in the July, 1931, issue of *Mental Hygiene*. This article is an excellent summary of the present status of the problem, emphasizing the importance of mental health and giving some specific recommendations. It is perhaps worth while quoting the end of this article. "In summary, I would suggest that the mental health of a nation is its greatest asset. Mental hygiene is a vital part of preventive medicine. 1. Medical students and physicians need more adequate training in psychiatry. 2. There should be internes in every hospital for the care of the insane. The presence of the inquiring student would do more to advance pathology, increase autopsies, and develop research in our mental hospitals than any other factor. 3. More of the research energy of the medical profession should be diverted into the difficult fields of psychology and psychiatry. 4. Education of the public so that they will view mental diseases as they do other diseases is important. 5. The handling and care of the mentally ill should be along medical rather than legal lines."

An article which is rather different from the usual type is entitled "Organic Problems in Child Guidance" by Paul Schilder, and appears in the July, 1931 issue of *Mental Hygiene*. This is essentially a neurological discussion of certain psychiatric problems.

In the same issue (July, 1931) appears an article by Karl de Schweinitz entitled "The Dangers and Advantages of Sex Instruction for Children." This is an exceedingly well-balanced article which is recommended for popular reading. de Schweinitz feels that the problem of sex instruction is not yet solved, and that there is definite danger in the "impulsive" giving of sex information to children. He points out that those advocating sex instruction talk as if giving the child the appropriate quantity of facts early enough "will in some mysterious way allay the sex urge and keep it in a state of quiescence until it can have proper expression. Unconsciously, we regard sex instruction as a method of emasculation." He also points out that many times the adult himself is receiving a vicarious sexual thrill in giving such instruction. de Schweinitz feels that there is danger in too active an attitude toward sex; that such issues should not be forced upon the child. He feels that sex instruction should not be given as a formal affair but should be discussed with children in the same manner that any other fact of life is discussed. He points out that "less than 100 pages would contain information enough to carry most people from infancy to and through marriage and parenthood."

In the *Archives of Neurology and Psychiatry* for April, 1931, Lawson G. Lowrey presents an interesting article entitled Some Principles in the Treatment of Behavior Problems in Children. This represents a general discussion of the principles involved and cannot be easily abstracted. If anyone is interested in a short article presenting the modern attitude of child guidance, this article is recommended. Lowrey points out that there are two parts of treatment; the direct and indirect. The direct treatment is that carried on with the patient, whereas the indirect is defined as "social-manipulative". This indirect treatment consists of the manipulation of things and of people in order to produce a more satisfactory environment for the child. A scheme of classification as to the factors involved is also given.

In the study of personality, two interesting books have appeared during the past year, one, "The Personality of Criminals" by A. Warren Stearns, which comprises the author's many years of work with the criminal; the second, entitled "Psychopathic Personalities" by Eugen Kahn. This latter book represents a very careful clinical study of the psychopathic personality influenced greatly by the viewpoint of Kraepelin. It forms an interesting contrast with the many books along the same line by the psychoanalytic school.

Horatio M. Pollock, in *The American Journal of Psychiatry* for November, 1931, has written an interesting article on "Recurrence of Attacks in Manic-Depressive Psychoses". His conclusions summarize his article so well that they are quoted verbatim.

"1. Although manic-depressive psychoses are usually spoken of as recurrent forms of mental disease, it appears from these data that in more than half of the cases there is no recurrence of attack of sufficient severity to cause readmission to a hospital for mental disease.

"2. The frequency of recurrences of attacks is nearly the same in the two sexes.

"3. The frequency of recurrence of attacks differs but little in the various types of these psychoses.

"4. Patients who are between 20 and 40 years at the time of first admission have fewer recurrences of attacks than patients younger or older.

"5. The average duration of attacks of recovered

cases is a little more than one year. The average duration of successive attacks varies but little.

"6. The average duration of attacks increases irregularly with advancing age."

Schizophrenia continues to be one of the most important problems in psychiatry, and many articles have been written on the subject. James V. May, in *The American Journal of Psychiatry* for November, 1931, has written a most valuable discussion entitled "The Dementia Praecox-Schizophrenia Problem." This article of 44 pages traces out the historical development of the concept, quoting from articles by Morel, Hecker, Kahlbaum, Kraepelin, Wernicke, Stransky, Meyer, Hoch, Bleuler and others. After discussing and criticizing the views of these various writers, May sums up his conclusions in some three pages. His definition of dementia praecox is worth quoting in full: "Dementia praecox is a disorganization of the personality developing during the period of adolescence or maturity. It is characterized, in general, by an incoördination of the mental mechanisms and is associated sooner or later with an intellectual deterioration without any definite organic basis which can be demonstrated at this time. Psychologically it is the reaction of an inadequate personality to the difficulties of his environment. This inadequacy is not demonstrable in the intellectual field, but expresses itself in an ability to react, as the normal well-balanced personality does, to the difficulties encountered during the course of the educational, economic, sexual, emotional, domestic, or social life of the individual." Dementia praecox, or schizophrenia is a clinical entity and can be divided into three forms: 1. There may be a primary progressive deterioration, which corresponds to the so-called dementia simplex or the hebephrenic reactions. 2. There is an autistic type which corresponds to the catatonic reaction. 3. There is an intellectual incoördination which corresponds to the paranoid and paraphrenic reactions. May does not feel that these are clear-cut types, and agrees that they are often complicated and modified. Finally, he holds that there are certain dementia praecox-like episodes which conform in a general way to the clinical picture but which recover in a short time. These reactions are associated with mental deficiency, psychopathic personality, and various organic conditions. May believes that these cases should not be considered as true cases of dementia praecox, and that the high recovery rate in dementia praecox which is reported by certain writers is due to the inclusion of such cases.

A number of papers have been published on the treatment of schizophrenia by psychological methods. In *The American Journal of Psychiatry* for November, 1931, there are four such articles: 1. By Malamud and Miller, "Psychotherapy in the Schizophrenias." 2. By Lewis and Blanchard, "Clinical Findings in 'Recovered' Cases of Schizophrenia." 3. By Zilboorg, "The Deeper Layers of Schizophrenic Psychoses." 4. By Sullivan, "The Modified Psychoanalytic Treatment of Schizophrenia."[1]

In reading over these and similar articles, one finds that great emphasis is laid upon individual work with the patient and the necessity of the physician spending a large amount of time in trying to understand the mechanisms of the disorder.

The value of a modified psychoanalytical procedure has been brought out by a number of writers. Here again it is necessary to be cautious about accepting reported cures of schizophrenia by various methods of psychotherapy. It is well to remember that a certain number of spontaneous cures occur, and to keep in mind the previously quoted article by May which points out that many of the so-called cures are not true cases of schizophrenia.

The psychoanalytic group have continued to publish many articles during the year, but few of them bring out anything new. One article by Freud, "Concerning Libidinous Types," is worth mentioning. This is an attempt to classify personalities. According to Freud, personalities may be divided into three main groups. 1: Erotic. 2. Compulsive. 3. Narcissistic. For the erotic personality, loving or being loved is the most essential thing in life and its main interest is in retaining the love of others. The compulsive type is distinguished by strong super-ego and is guided by ideals rather than objects. The narcissistic type is chiefly concerned with self-preservation; it represents the leader type. While mentioning three such types Freud agrees that there may occur any mixture of the different types. He holds that the erotic type is more prone to hysteria, the compulsive type to compulsive-neuroses and the narcissistic to psychoses and criminality. He feels that the mixed type is more prone to lead to a neurosis but does not feel sure.

In the *Journal of the American Medical Association* for April 25, 1931, appears an article by Alexander on "Psychoanalysis and Medicine." In this article, Alexander develops the modern psychoanalytic view and tries to explain why psychoanalysis has had so much difficulty in securing acceptance. He questions whether psychoanalysis really belongs to medicine, but since there is no clear distinction between what is mental and what is physical, it seems more practical to include mental diseases and psychoanalysis in medicine, although he points out that "by definition, psychoanalysis would be excluded from medicine." There is a short history of the development of psychoanalysis, a discussion of the reasons why persons refuse to accept psychoanalysis, and then a comparison of the psychoanalytic observations to those of the or-

dinary person in which he points out that certain sources of error are eliminated by the psychoanalytic technique. There are four principal sources of error, according to Alexander, in the ordinary observation of behavior. 1. The person under observation may not give a complete or correct account of his mental condition, due to lack of interest. 2. He may be unable to do so because of his own repressions. 3. The observer may be so different from the patient that he will be unable to appreciate properly the data given. 4. The observer, because of his own repressions, may see things in a very distorted way. Psychoanalysis, according to Alexander, represents a scientific method of studying the human mind and for treating various mental diseases.

Of considerable interest is the recent book by Alexander and Staub, entitled "The Criminal, The Judge and The Public." This book represents an attempt at a psychoanalytic interpretation of crime and the criminal. For those wishing the more recent psychoanalytic views on this subject the book is recommended. It presents the rather involved psychoanalytic doctrines in as clear and readable a fashion as possible so that the individual with little or no familiarity with psychoanalytic formulations is able to follow it fairly easily. The classification of criminals is of considerable interest, and is: "I. The neurotic criminal, whose hostile activity against society is a result of an intrapsychic conflict between the social and anti-social components of his personality; this conflict, like that of a psychoneurosis, comes from impressions of earliest childhood and from circumstances of later life (psychological etiology). II. The normal criminal, whose psychic organization is similar to that of the normal individual, except that he identifies himself with criminal prototypes (sociological etiology). III. The criminal whose criminality is conditioned by some pathological process of organic nature (biological etiology)." In addition there are, according to the authors, a certain number of normal individuals who may, under special circumstances, commit crimes. Such individuals, however, are not chronic criminals and their behavior does not require anything more than the ordinary matter of fact explanation which is usually given to it. The book discusses the problem of crime, the reasons why a great deal of criminality is regarded as a form of neurotic behavior, and some suggestions as to how the whole problem should be dealt with. There are also some interesting cases detailed in support of the theories presented.

A most important article by Margaret Mead in *Progressive Education* for February, 1931, is entitled "The Meaning of Freedom in Education." This article represents the attitude of an anthropologist toward child education. It is really an argument against the relatively unsupervised education of the child. Mead points out that one trend in modern education has been that the child should have freedom to express himself and should not be directed, and that if left free he will develop in a more satisfactory manner. Mead is very doubtful of this and points out that taking three different races in three different parts of the world where children are brought up by entirely different methods of education, the result is almost identical; that is to say, it leads to a repetition of the older generation. She reports her own experiments among the Manus of New Guinea where no attempt is made to teach the children, and where they are left quite free to express themselves. She finds that these children instead of utilizing such freedom for new forms of self-expression simply continue to play the old games which have been handed down to them by previous generations, and appear rather bored with life. When, however, she supplied them with pencils and paper and encouraged them to draw, they took to it eagerly and continued for five months to draw on every surface they could find. However, they produced nothing really worth while. Her conclusions are that supervision is necessary in the classroom. Also she maintains that the classroom is incapable of changing our civilization, and that anyone who has studied the different educational methods of the various races throughout the world and observed how inevitably the children develop into replicas of the adult in each of these societies will realize that the educator cannot produce such changes.

The treatment of encephalitis is discussed in very interesting fashion by Bond and Appel in a book of 163 pages entitled, "The Treatment of Behavior Disorders Following Encephalitis; An Experiment in Re-Education." A much briefer article by the two authors is entitled "The Treatment of Post-encephalitic Children in a Hospital School." This article appears in the March, 1931, issue of *The American Journal of Psychiatry*. The material covered in this briefer article is essentially the same as that of the book. The authors describe the work carried out at The Department for Mental and Nervous Diseases of the Pennsylvania Hospital. A special ward was devoted to the treatment of postencephalitic children. Very adequate living quarters were provided including occupational shops, gymnasium and a swimming pool. There were also large grounds for recreation. A schoolroom was provided with a trained teacher; special nurses and other workers were provided. A regular routine was laid down from 6:30 in the morning until 8 at night. It was felt that under such circumstances the children would get into fewer difficulties and would gradually acquire more social ways of behaving. However, the routine was not absolutely rigid and was altered for the individual case. Much attention was paid to understand-

ing the individual child. They were not regarded as simply cases of encephalitis, but as individuals with different personalities, all of whom were suffering from an organic brain disease. Methods are discussed whereby improvement was obtained. The results were that out of 48 post-encephalitic children, 46 improved to a fairly satisfactory level in the hospital. Out of 20 returned to their homes, seven made a good adjustment. This contribution is of particular importance in breaking down some of the barriers between organic and psychological concepts, and demonstrates that the mere fact that one has an organic brain condition does not mean that reëducation and psychotherapy are of no value.

An excellent article by Douglas A. Thom on the treatment of epilepsy is entitled "Epilepsy and its Rational and Extra-institutional Treatment" and appears in the January, 1931, issue of *The American Journal of Psychiatry*. Thom considers the treatment under seven headings: 1. The careful clinical examination, including laboratory and other tests in order to eliminate so far as possible any organic factors. 2. A frank discussion of the findings with the patient. 3. An equally frank discussion of the patient's incapacities in relation to his future happiness and efficiency. 4. Psychotherapy for the patient which should remove the feeling of mystery and of apprehension concerning the disease as well as the stigma attached to it. An attitude of optimism should be instilled. The patient should be helped to understand how he, himself, can aid in the treatment of his condition by making accurate observations for the physician and faithfully carrying out his treatment. Make the patient feel that the physician is still interested in studying and treating his condition even though no organic factors have been found. Discuss quite frankly the present-day knowledge of epilepsy and the possibilities of new treatments. 5. Education of the family. Those in touch with the patient must understand the facts about the disorder and the proper attitude they should take toward the patient. 6. The employer and others coming in immediate contact with the patient outside the home should receive similar information. 7. A suitable vocation should be selected, and education should be shaped toward some similar vocation.

BIRTH RATE AND THE DEPRESSION

Although there have been very many differences of opinion with reference to the effect of the general depression of the last few years, it is interesting to note the facts as set forth by the Metropolitan Life Insurance Company in its statistical bulletin of August, 1932. It is there stated that the birth rate in the United States has reacted to the present prolonged period of lowered business activity by showing, in 1931, an unusual decline and in all probability it will, in 1932, reach a new low point to which the observed long-time downward trend would not have brought it until 1934 or later. It is especially noticeable that the decrease is more evident in the industrial than in the agricultural population although it so happens that the greatest per cent decline is shown in a distinctly non-industrial state, namely, Arizona. It is also significant that European countries, which have been under even greater economic strain than the United States, have shown similar declines. This downward tendency has been especially evident in the birth rate of the United States during a period of many years, as well as throughout the civilized countries of the entire world. It is believed that the trend has been due to the increased dissemination of knowledge of birth control and its practice among the masses.

For the expanding Registration Area of the United States the falling off in the birth rate from 1915 to 1931 amounts to an average of 2 per cent per year, but is modified from time to time by various influences, such as war, unfavorable business conditions or a widespread epidemic of disease, which have increased the velocity of the downward trend.

The birth rate for the United States Registration Area in 1929 was 18.9 per 1,000 population and the same figure was repeated in 1930 but in 1931 it dropped to 17.8. The 1931 rate does not include Utah. It is of great importance to recognize that the present fecundity of the American population is barely adequate to maintain our numbers at a fixed level. Temporarily we have a good excess of births over deaths but only because of past conditions which have given us a relative excess of women in the child-bearing ages. A further fall in the birth rate will presently bring us below the self-sustaining level when the effect of past high birth rates has worn off. It is possible that when the present economic stringency passes there will be a recovery in our fecundity to a higher point through an increase in the marriage rate. Failing this, it appears inevitable that, at some not very distant date, our population will not only come to a standstill, but will actually decline because of the diminution in the accretion from outside, brought about by the present immigration laws.

CASE RECORDS
of the
MASSACHUSETTS GENERAL HOSPITAL

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN WEEKLY CLINICAL-PATHOLOGIC EXERCISES

EDITED BY RICHARD C. CABOT, M.D.
F. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 18421

CHILLS AND SWEATING OF FIVE MONTHS' DURATION

MEDICAL DEPARTMENT

An American-born waitress thirty-eight years old was sent from the Emergency Ward to the wards for study. The chief complaints were chills and sweating of five months' duration. The history she gave was contradictory and unreliable as to details.

Seven months before admission she was in bed for three days with "grippe". Following this she could not walk for a week because of soreness in the ankles and knees. There was no pain or swelling. She was then perfectly well until five months before admission, when her left elbow was painful and swollen for three weeks following a sprain. With this she had "blood poisoning" of both hands following pricks, lasting two weeks and accompanied by nocturia six or seven times a night, marked thirst and anorexia. She felt too weak to get up from bed until four weeks after the sprain. When she did go out, four months before admission, she had a chill with inability to speak for five minutes and numbness of the left arm, hand and face lasting an hour. She had frequently had such numbness in the past two years. For the next two weeks she was perfectly well except for nocturia twice a night which persisted until she entered the hospital. At the end of two weeks she had a severe chill lasting an hour followed by daily chills for a week, then often more than one a day for eight weeks. Six weeks before admission she entered a hospital. For four weeks she had had quinine in large doses. For nine days before admission she had daily several attacks of constriction about the chest with great difficulty in breathing and a feeling of terror. For the past week she had had two chills a day and frequent nausea and vomiting. The day before admission her feet became swollen and tender. Since the onset of the illness she had lost 45 pounds.

Her mother died of heart trouble. The patient had been married twice. She was divorced from her second husband. She had two children living and well.

She had a questionable tuberculous gland in infancy. She had frequent very severe sore throats in childhood. At fourteen she had pneumonia and possible malaria. At twenty-six she had an operation for ruptured appendix. Ovarian tumors were found and panhysterectomy was done. For ten years she had had dyspnea on exertion and had sometimes had to be carried from her work to her room. Nine years before admission her sputum was blood tinged but was said to be negative. She spent six months in Bermuda at that time. Six years before admission she had an infected left axillary gland incised. She was told then that all her glands were enlarged, and x-ray examination showed enlargement of the heart and "glands" in the lungs. Six years before admission she spent nine months in Nassau, Florida and Virginia, where she was told she had malaria.

Physical examination showed a rather poorly nourished woman with very moist skin and marked pallor of the skin and mucous membranes. The heart was enlarged to percussion to the anterior axillary line. There was a questionable systolic thrill at the apex. There were occasional extrasystoles. A loud blowing systolic murmur was heard at the apex transmitted into the axilla and a systolic murmur, not so loud, at the base. No diastolic was heard. The pulmonic second sound was accentuated. The pulses and artery walls were normal. The blood pressure was 108/55 to 82/50. An electrocardiogram showed normal rhythm, rate 100, low voltage, slight left axis deviation. The abdomen was slightly full. There was slight tenderness in the epigastrium, where the liver edge was thought to be felt two fingerbreadths below the costal margin. There was a questionable liver edge three fingerbreadths below the right costal margin. The spleen was felt three fingerbreadths down. Rectal examination showed moderate external hemorrhoids. There was slight pitting edema of both ankles. The muscles of the extremities showed fairly marked tenderness. The pupils were normal. The knee jerks and ankle jerks were normal. There was bilateral clonus, better sustained on the right. On examination of the fundi, hurried because of the patient's condition, no abnormalities were found except a few large vitreous opacities and some fine ones in the left eye.

The urine was normal in amount, the specific gravity 1.010 to 1.020. There was a slight trace to a very slight trace of albumin at all of eight examinations. The first examination showed acetone, diacetic acid and a slight trace of sugar. All examinations showed white blood cells. Two showed a few red cells. The blood showed 3.18 to 1.24 million reds, hemoglobin 50 to 30 per cent, 18,500 to 34,300 to 13,400 white cells, 96 to 70 per cent polynuclears. The entrance smear showed marked crenation, marked achromia, very slight variation in size, decreased platelets, no parasites. Two other smears showed no parasites. The variation in size became

marked. The last two smears showed basket cells. Hinton and Wassermann tests were moderately positive. The non-protein nitrogen was 26. A gonococcus fixation test was positive.

The chart was septic throughout, at first with wide daily swinging, less marked at the end. The temperature was 96.1° to 105.3°, the pulse 78 to 140. The respirations were 18 to 40.

X-ray examination showed diffuse enlargement of the heart at the apex reaching the axillary line and obscuring the lower part of the left lung field. There was dullness in the lower two thirds of both lungs distributed along the lung markings and becoming more dense towards the base. The right costophrenic angle was obliterated. The left was not distinctly seen.

The patient had daily severe chills and sweats, one chill lasting five hours. She coughed a great deal and had moderate air hunger. Her skin showed small reddish spots, at first only a few but increasing in number until the whole skin was peppered. Surgical consultants found the spleen and the right kidney enlarged. In spite of transfusions she steadily lost ground more and more rapidly. She developed severe dyspnea and a presystolic gallop rhythm. A large slightly tender mass with a definite edge was felt in the right flank down to the crest of the ilium. The spleen was also much larger than at entrance. A month after admission she died.

Clinical Discussion

by dr. maurice fremont-smith

As to the cause of chills and sweating of five months' duration we have to think first of some septic process and, as a poor second, of malaria.

I cannot put together all the symptoms of the first three months. There is some difficulty about the patient's observation. That does not mean we cannot make some guesses as to what is going on. This pain in the knees and ankles, then good health, then pain in the elbow may mean tiny emboli into the joints. We sometimes see these painful joints as one of the very early symptoms of subacute bacterial endocarditis coming on while the patient still feels perfectly well. It certainly is not typical rheumatic joint infection because in that case we should have not only pain but swelling. I do not know what "blood poisoning of the hands" was. The nocturia must be taken as possibly significant. It may have been that she was sleeping poorly; it may have been partly that she was drinking a great deal of water; it may have been that she was showing one of the earlier signs of chronic glomerular nephritis, but we have so far no other evidence of that. It is one of the things one keeps in mind as a possibility. Diabetes is also to be kept in mind.

I think that it is quite possible that she used the word "sprain" to indicate the beginning of pain. So often a patient thinks that there has been an injury simply because he is looking for an explanation of his "trouble".

Numbness of the left hand, arm and face lasting an hour means a cerebral lesion, either a spasm of a blood vessel or a tiny hemorrhage, and since the arm, hand and face are involved on the same side we have to assume a lesion pretty high up, probably cortical, because if it were an internal capsule lesion we should expect the leg to be involved too. In the internal capsule the fibers going to the arm and leg are so close together that any lesion there usually involves the whole side. When we get certain individual paralyses we are very apt to be dealing with a lesion of the cortex. A tiny infarct would also be consistent with the picture so far. Sepsis, joint pains, this peculiar central nervous system injury—we could put all those together if we assume a number of little infarcts perhaps coming from the heart. It may perfectly well be a syphilitic manifestation. Transient paralyses are not at all uncommon in central nervous system syphilis, but are usually of a few hours' or a few days' duration. This is very short for anything except spasm. It is hard to think of even an embolus the effect of which would last only an hour.

If quinine is given in large doses any type of malaria except malignant malaria will be relieved in forty-eight to seventy-two hours.

I can understand the feet becoming swollen from chronic passive congestion. I can understand the ankles becoming swollen and tender from another infarct (if we assume infarcts in the joints) or from possible rheumatic infection; but why the feet should become both swollen and tender I do not know.

So far we have a story of a thirty-eight year old woman with a peculiar history in which chronic sepsis is the outstanding factor. The cause of that sepsis we do not as yet know. I suspect subacute bacterial endocarditis as the first possibility.

None of those things—the tuberculous gland, frequent sore throats, pneumonia, possible malaria and ruptured appendix—apparently can have anything to do with the present illness.

With the ten years of dyspnea on exertion we have evidence that points definitely towards heart failure.

Blood tinged sputum suggests tuberculosis and also chronic passive congestion, although to have chronic passive congestion sufficient to give hemoptysis nine years ago and be living today is quite a feat.

All her glands were enlarged six years before admission. There are certain things we know now she did not have. She did not have lymphatic leukemia and she certainly did not have lymphoblastoma, because she would not have lived for six years with either of those diseases.

One hates, as Dr. Cabot says, that word "ques-

tionable". One wants to say, "Do you think there is or do you think there is not?" There probably was felt a tender congested liver. But the spleen is not much enlarged in chronic passive congestion. Among the causes of enlargement of the spleen are malaria, Hodgkin's, subacute bacterial endocarditis, pernicious anemia, splenic anemia, the leukemias and cirrhosis of the liver. I should like to know what the spleen felt like. The enlarged spleen of chronic malaria is rather typical. It is extremely hard and fibrous, whereas I think an infarcted spleen is not hard.

Of course the marked tenderness of the muscles of the extremities might possibly go with trichiniasis, but we have nothing else to make us think of that.

The fact that the pupils, knee jerks and ankle jerks were normal is pretty good snapshot evidence that there was no syphilis of the central nervous system.

If she had one sided clonus we would say that the pyramidal tract was knocked out somewhere, but I think we must leave this bilateral clonus unexplained.

I notice nothing significant in the eye grounds, no evidence of emboli, no petechiae, which would go with subacute bacterial endocarditis, no choroiditis, which would go with syphilis. Those were the things they were looking for.

The first urine examination showed a slight trace of sugar. Did the others show no sugar? In other words was that simply a starvation acetone (sugar unexplained), or was that really evidence of underlying diabetes?

Miss Painter: There was no sugar later.

Dr. Fremont-Smith: The gravity, the albumin and the white cells in the urine could go with chronic passive congestion; not the acetone and sugar. The blood sugar is not recorded. That would have been interesting.

There is nothing in the blood picture inconsistent with a long low grade infection. One might wonder whether that white count means anything in itself, any sort of leukemia; but we have enough to explain it as it is, and the smear showed no evidence of abnormal white cells. There was 96 per cent polynuclears, which is very good evidence of sepsis. There were no parasites—no malaria of course. Why are there decreased platelets? We expect increased platelets with any type of secondary anemia. That we cannot explain unless she had an aplastic type of anemia from some poisoning of the bone marrow, which she apparently did not have. Dr. Cabot, do basket cells mean anything to you?

Dr. Cabot: Bad secondary anemia.

Dr. Fremont-Smith: The thing to do here is to hold on very hard to the important things and try to explain what we can on one hypothesis. One can have a positive Wassermann in sepsis, and this is sepsis. That is one of the so-called picket fence charts, the sort of chart we get when organisms are being thrown into the blood stream, the sort we get for instance when following mastoid we have a lateral sinus thrombosis and organisms thrown into the blood stream. We can have the same sort of chart, but less irregular, with any sepsis. We can have it with an appendix abscess. With that sort of temperature a positive Hinton and Wassermann may be disregarded. A gonococcus fixation test was positive. She may have had gonorrhea, but I doubt if that had anything to do with this illness. With acute gonorrheal endocarditis the gonococcus fixation test would be negative, wouldn't it, Dr. Mallory?

Dr. Tracy B. Mallory: It might be either positive or negative.

Dr. Fremont-Smith: That the pulse got down to 78 is very interesting. A person with severe sepsis would rarely get a pulse below 100 even if the temperature were down. It is the sort of thing that would fit in with the subacute bacterial endocarditis type of sepsis rather than with anything else, because those people feel perfectly well when afebrile even though they have had the disease for months.

Dr. William C. Martin: This is a portable film. All I can say is that it shows marked enlargement of the heart downward and to the left in the region of the apex and slight congestion of the lung fields at the time the film was taken.

Dr. Fremont-Smith: Can you say that the glands in the lungs are not enlarged?

Dr. Martin: Yes, I can say they are not enlarged.

Dr. Fremont-Smith: We know she had a big heart. We are quite sure she had heart disease and that she had sepsis. There is nothing significant in the fact that the right costophrenic angle was obliterated and the left not distinctly seen. That merely means a big heart, not necessarily fluid.

Of course one is tempted to say those small reddish spots were emboli and that they clinch the diagnosis of subacute bacterial endocarditis. I am going to ask Dr. Cabot whether such a description fits emboli due to subacute bacterial endocarditis?

Dr. Cabot: I have seen it a number of times.

Dr. Fremont-Smith: We usually have so much trouble in finding them that I wondered whether they might be something other than petechiae.

"She developed severe dyspnea and a presystolic gallop rhythm," as any heart will when it is under too great stress and when it is near the end of its running. That simply means a very loud third sound.

Probably that mass in the right flank was her liver, but it is a queer place to feel the liver. The liver is of course characteristically felt in front. If they felt something bimanually it is much more likely to have been the kidney.

This case is too hard for me. We can say two things about it. Possibly she had subacute bacterial endocarditis with emboli. That would account for her long history, for her sepsis, for her petechiae, for her joint pain. It might account for that peculiar central nervous system accident. She may or may not have had syphilis. Is there any connection between the two? Subacute bacterial endocarditis sometimes rests on the basis of a syphilitic valve. She has had no frank rheumatic fever. The murmurs in the heart are against rather than for syphilitic heart disease, because in syphilitic heart disease it is the aorta that is first involved and therefore the first murmurs we get are from the aortic valve rather than a murmur such as this, which is apparently due to mitral insufficiency. On the other hand there may not be any mitral disease whatsoever. She may simply have a heart that is so big that the mitral valve is incompetent without any localized disease. At thirty-eight, with a history of a number of years of dyspnea, the best guess is that she had a rheumatic heart, that that heart was failing and that she had subacute bacterial endocarditis. I do not think she had leukemia or Hodgkin's disease.

DR. CABOT: I should like to comment on that report of the crenation of those cells. Of course they are never crenated in a blood smear properly made.

X-RAY INTERPRETATION

The changes in the chest are probably secondary to the condition of the heart. There is no evidence of an appreciable amount of fluid in the pleural cavity.

CLINICAL DIAGNOSES (FROM HOSPITAL RECORD)

Subacute bacterial endocarditis.
Amyloidosis?

DR. MAURICE FREMONT-SMITH'S DIAGNOSES

Subacute bacterial endocarditis, with emboli to joints, brain and kidneys.
Syphilis?

ANATOMIC DIAGNOSES

Acute bacterial endocarditis, mitral—unidentified Gram-negative diplococcus.
Cardiac hypertrophy and dilatation.
Hydropericardium.
Hydroperitoneum.
Pulmonary atelectasis, left lower lobe.
Pulmonary infarction, slight.
Splenic infarction.
Splenomegaly.
Embolic nephritis.
Multiple emboli of the brain.
Petechiae of the skin and the left ureter.
Central necrosis of the liver, acute.
Aortitis, syphilitic?
Acute endometritis.
Cervical erosion.
Healed duodenal ulcer.

PATHOLOGIC DISCUSSION

DR. MALLORY: There was one point that was withheld from Dr. Fremont-Smith in this history. There were two positive blood cultures showing a Gram-negative diplococcus. That plus the position fixation test for gonococcus would make one assume that we were dealing with a gonococcus endocarditis; but as a matter of fact it was not a gonococcus so far as we can make out.

DR. CABOT: What was it?

DR. MALLORY: I do not know. When a case from the region near Boston shows a Gram-negative diplococcus on blood culture the chances are about four out of five that it is going to turn out to be a meningococcus rather than a gonococcus. We have found that distinctly more common than gonococcus in this region. On the other hand in the Johns Hopkins Hospital a very high proportion of gonococcus endocarditis has been found, though most of those cases were reported back in 1900. At any rate the particular organism we got in this case does not respond to any of the proper cultural tests for the gonococcus, the meningococcus, the micrococcus flavus or the catarrhalis, which are the four commonly recognized Gram-negative diplococci. It was not an influenza bacillus or a member of the Brucella group. I think there was a somewhat similar case at the City Hospital, and there too they have not yet been able to identify the organism.

The vegetation was on the mitral valve. There were multiple small emboli in the brain. The cardiac musculature showed acute myocarditis, which it often does in acute bacterial endocarditis of any type. We found also passive congestion, acute infarcts in the lung, a septic spleen, embolic nephritis; also some aortitis which we thought but were not entirely sure was syphilitic.

CASE 18422

INTERMITTENT DIARRHEA AND WEAKNESS IN A MAN OF FIFTY-FOUR

MEDICAL AND SURGICAL DEPARTMENTS

PRESENTATION OF CASE

DR. ALFRED O. LUDWIG*: This is the case of a man of fifty-four, an unemployed musician, who came into the hospital on February 4 complaining of diarrhea and weakness which had been going on intermittently for six months.

The story was that six months before coming in he had a sudden attack of diarrhea lasting two days with five loose but otherwise normal movements daily. After this he had much weak-

*Recently senior interne on the East Medical service.

ness and marked pallor. There was no further symptoms until about one month before he entered, when he had another attack of diarrhea much like the first one. One week after that he noticed bright red blood in his stool. At this time hemorrhoids which he had had for ten years became more painful. Following this he had marked increase in pallor and weakness. Since that time his bowels had been markedly constipated. He had no movements for eight or nine days. He had lost fifteen pounds during his present illness.

DR. TRACY B. MALLORY: If we stopped the history at that point there would be one unanimous diagnosis, would there not? One could hardly ask for a better history of cancer of the rectum, with the additional fact that his father had died of that disease.

DR. LUDWIG: He went to a physician who sent him here to have malignancy of the gastro-intestinal tract ruled out.

Physical examination showed him to be markedly pale, with a subicteric tint to his skin. His teeth showed a great deal of dental work. The tongue was somewhat smooth at the edges. There were small cervical, axillary, inguinal and right epitrochlear glands. There was a soft systolic murmur, loudest at the pulmonic area. There was a small lipoma at the lateral edge of the right scapula. There was a slight relaxation of both the inguinal rings, with the impulse felt on cough on the left. There was also a small left hydrocele. Rectal examination showed external hemorrhoids.

When he came in laboratory studies showed a red cell count of 1.36 million, a white cell count of 3,100, hemoglobin 35 per cent Tallqvist. The red cell count was repeated the next day and was 1.5 million. The urine was negative. The blood smear was quite typical of pernicious anemia. There was a marked variation in size and shape, decrease in platelets and 0.9 per cent reticulocytes.

While he was on the Surgical service he ran a persistent temperature of 103° by mouth, which gradually came down to 100°.

Gastric analysis showed complete absence of free acid in the fasting contents and the test meal at half an hour, and only 5 cubic centimeters after one hour with histamine and alcohol. A gastro-intestinal x-ray series was negative. A barium enema was negative. Proctoscopy was also negative.

On the twelfth of February he was transferred to the Medical service. Treatment with liver by mouth had been begun on February 5. He was started on the equivalent of one pound of liver a day by mouth. We gave him a domestic extract which Dr. Castle recommended. He had iron and ammonium citrate, one dram three times a day, because we felt that there was some element of secondary anemia, probably from the bleeding hemorrhoids.

While he was on the Medical service he continued to run a high temperature. He was given liver extract intramuscularly, 5 cubic centimeters on two occasions. We never could find anything to account for his temperature. We thought he might have thrombophlebitis. There was no pain. There was nothing in the chest. The urine continued to be normal except for occasional white and red cells. On February 19, five days after he was transferred, he did show crackles at both bases and a little sacral pitting. The following night he had an attack of marked dyspnea and orthopnea. The next morning he had definite gallop rhythm. The basal râles increased. I thought at the time that he had mild coronary occlusion. Then for about two days he had some diminution in râles. He still continued to show edema and pulmonary congestion. The radiologist thought there might possibly be consolidation at the right lower lobe. We concluded that the teeth, which by x-ray had shown many apical abscesses, were a possible focus of infection which might be operating against the proper action of the liver. The red blood cell count on the 15th of February was 1.82 million, the reticular count 5 per cent only. We never got it higher than that. On February 20 the red cell count reached 1.97 million; on the 23rd it was 2.11 million, very slightly improved. The white cell count on our service gradually rose from 10,000 on the 12th of February to 15,000 on the 20th. It was 11,000 on the 24th and 24,000 on the 25th, the day of death. The icteric index was 8. Blood cultures on two occasions were negative. The non-protein nitrogen was 37.

On the morning of February 24 the gallop rhythm had stopped. In the afternoon about four o'clock he began sweating profusely and was very pale and dyspneic. The pulse was about 180. The blood pressure was 180/90; it was previously 120/80. In spite of the anemia he became quite cyanotic. He was put in an oxygen tent, with marked improvement. He was also given morphine and caffein. The blood pressure failed gradually to 140/60. The pulse came down somewhat and was quite strong. At that time he was comatose and unable to respond. The gallop rhythm continued. There were many moist râles throughout the whole lower half of the chest. The temperature was 101°.

The next morning he was still quite dyspneic, with dullness, diminished tactile fremitus and diminished bronchial breathing with râles in the right side. We thought that he had possible bronchopneumonia or even some fluid. The gallop continued at a rate of 120 to 140. The blood pressure was 160/100, which was a decided rise from what it had been. Throughout the previous day it had been rising. The night before it had

been 170/100. A diagnosis of pulmonary embolus was considered.

Then he was transfused. We thought that as he had anemia, transfusion might help to overcome the infection. In the afternoon he developed an almost typical picture of pulmonary embolism. He was extremely cyanotic and very dyspneic. There were markedly distended veins in his neck and hands. There was marked increase in venous pressure. He also raised some bloody sputum. At that time he was however quite comatose. From that time he gradually sank. That night, February 25, he died.

DR. AUBREY O. HAMPTON: The first chest film was taken on February 20. There is dullness at both bases, more marked on the right. I think we can assume that that is due to passive congestion because the density becomes more marked towards the base. The only thing that is not characteristic of passive congestion is this fairly localized area of dullness, and there is a little more density on the right than on the left. A film taken five days later does not show much change except that he has another localized area of consolidation over the angle of the left scapula. The diffuse dullness of the lungs would obscure almost any type of fine miliary lesion, or even malignancy of the lung root. We could not tell from these films whether he had either of these lesions. I do not see evidence of much fluid, although there is probably some present.

CLINICAL DISCUSSION

DR. LUDWIG: We made a diagnosis of pernicious anemia, questionable thrombophlebitis, questionable pulmonary infarct, questionable bronchopneumonia, arteriosclerotic heart disease and congestive failure.

DR. WILLIAM B. BREED: When this patient was first seen by the Medical service in the Surgical wards it was felt that he had a very severe grade of anemia, enough to account for the increase in temperature. On the other hand after he had come to the Medical wards and had made practically no response to liver treatment, we felt that he probably did have some underlying infection which prevented his improvement. Whether the caries of the teeth could have been an element in his lack of response I do not know. Up to the time that he had the acute episode of pulmonary infection he presented a picture of severe pernicious anemia with some obscure source of infection.

The interesting point about him is whether or not during this episode of pulmonary infection he may have had an infarct of the right side of his heart. He had markedly distended veins. His blood pressure did not fall, but I think it is possible to have an infarct of the right side of the heart without a typical fall in blood pressure such as we find with involvement of the left side. I do not see how the diagnosis can be made here. Transfusion at that point was somewhat of a gesture. I did not hope for any good effect.

DR. WYMAN RICHARDSON: I wonder whether transfusion in the presence of pneumonia is an advisable procedure. I have a feeling that transfusion sometimes causes increase of difficulty in pneumonia.

DR. BREED: As a matter of fact I had the same impression myself. The transfusion was under way when I happened to see him that morning. I do not believe I should have suggested transfusion in the presence of pulmonary infection.

CLINICAL DIAGNOSES (FROM HOSPITAL RECORD)

Pernicious anemia.
Pulmonary congestion.
Hemorrhoids.

ANATOMIC DIAGNOSES

Pernicious anemia.
Hyperplasia of the bone marrow, erythroblastic.
Bronchopneumonia, left upper lobe.
Pulmonary edema, left upper lobe.
Septicemia, streptococcus hemolyticus.
Atelectasis of both lower lobes.
Hydrothorax, bilateral.
Ascites and edema of the ankles, slight.
Hyperplasia of the prostate, slight.

PATHOLOGICAL DISCUSSION

DR. MALLORY: The autopsy does not offer any good mechanical explanation of his symptoms. He had evidently a very severe pernicious anemia. The bone marrow shows almost as much hyperplasia as if he had not had liver treatment. That is not quite true, as there were nests of normoblasts, but it shows extreme hyperplasia with a large proportion of the cells still undifferentiated.

The heart was absolutely negative. It was normal in weight. The valves were all essentially negative. The coronaries were completely clear. There was no suggestion of infarction.

The other rather striking feature at autopsy was in the lungs. There was a well marked pleural effusion on both sides, 900 cubic centimeters on one side, 700 on the other, and very marked edema which seemed in gross to be of the left upper lobe. A few small groups of lobules were definitely consolidated, but the major portion was soft, atelectatic and dripping with fluid. Blood culture at autopsy showed hemolytic streptococcus. The lesion in the lung was obviously entirely of infectious origin, a pneumonia caught before the stage of complete solidification.

The microscopic sections from the lung showed a very marked edema and also considerable numbers of polynuclears in the alveoli. There is still relatively little fibrin.

The bone marrow shows extreme hyperplasia. The fat cells normally should occupy from half to two-thirds of the total marrow space. Here there are only a very few scattered ones throughout the marrow. In contrast, the bone marrow from another case of pernicious anemia shows approximately half the normal number of fat cells. The remainder of the tissue here shows marked erythroblastic hyperplasia, but with a fair degree of differentiation, so that there is a relatively high percentage of normoblasts. That is a marrow which we can say is consistent with pernicious anemia, but the changes are not marked enough to be diagnostic. They might go with secondary anemia. This is about what one would expect to find in a treated case with partial response such as he had.

DR. F. DENNETTE ADAMS: I should like to ask Dr. Richardson and Dr. Breed why they think that transfusion is not advisable in the presence of pneumonia.

DR. RICHARDSON: It has been suggested by people who know more about it than I that not infrequently when patients with pneumonia are transfused the pneumonia seems to get considerably worse. Also it may appear so soon after transfusion as to make it seem as if the transfusion were in some way related. My experience is very limited, but I have seen it appear in two cases, so I am willing to believe it.

DR. ADAMS: You have seen presumably severe pneumonias that developed immediately after transfusion? Were those pneumococcus pneumonias or streptococcus?

DR. RICHARDSON: Pneumococcus, I think.

DR. FRANCIS T. HUNTER: That may be explained by lowering of the white cell count. In agranulocytic angina we lower the white cell count markedly when we transfuse. That occurs in nearly every disease with a low white cell count. I have been looking back over some cases of benzol poisoning we have had and find that there was a marked decrease in the white cell count every time we transfused. I think Jackson feels definitely that in case of agranulocytic angina, transfusion is likely to have fatal results.

DR. BREED: Another question might well be brought up here and was considered at the time, namely whether he should not have been transfused a week or two before he developed an acute, obviously severe infection. I know that in certain cases of stubborn secondary anemia when the patients have reached a level below normal one transfusion will often push them to a level from which they will carry on and return to normal.

DR. RICHARDSON: I think there is a question whether transfusion will give response where liver will not.

There is another point about this case. There was one case of pernicious anemia that did not respond until the teeth were removed, draining a large abscess. Then immediately there was a very striking improvement. I wonder whether in this case possibly the abscessed teeth may have had some relation to the lack of response.

DR. LUDWIG: Do you think it is advisable to go ahead with extraction of abscessed teeth when the red cell count is 1.5 million? He was a pretty ill man.

DR. RICHARDSON: I think that it is very definitely advisable if you are not getting a response in any other way.

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THE PETITION OF THE CHIROPRACTORS

ONE of the important subjects discussed at the recent meeting of the Council of the Massachusetts Medical Society was the initiative petition of the chiropractors and their friends for endorsement of this cult by the voters of this State.

This movement was discussed in the report of the Committee on Legislation and, although explanatory literature had been submitted to the councilors and had appeared in the public press, questions were asked from the floor which required explanations by Dr. Thomas J. O'Brien, representing the Committee.

This indicates that some physicians were not familiar with the various steps which have preceded or been taken in connection with the petition.

How far lack of appreciation of the importance of this appeal for recognition permeates the medical profession is uncertain. It is, however, very certain that the wishes of the chiropractors will prevail unless there is concerted and widespread activity by those who are willing to devote time and energy to placing the facts before the people. The chiropractors claim to have secured the endorsement of tens of thousands of voters who have been interviewed. The results of the vote will indicate the extent of a certain kind of distrust of the medical profession. For more than a decade, chiropractors have looked forward to an invasion of Massachusetts. One of their earlier attempts was to found a chiropractic school in Boston, but this failed as have repeated appeals to the Legislature for the passage of their bills up to the present time; the rebuff of this year's session of the Legislature was the most spectacular of the series, for the recorded votes were about three to one against the bill.

Chiropractic, with its sixteen thousand practitioners in this country, stands as the most powerful and aggressive cult of the day, although its great center of influence appears to be disintegrating and the number of its students seems to be declining. Within its ranks there is dissension and discord.

It has, however, been able to secure recognition in a large proportion of the states of this Union through the employment of able counsel familiar with legislative procedures. The method of approach has been to present testimony of alleged cures by persons who claim to have been unable to obtain relief from regular practitioners of medicine, and to charge that the medical profession is selfishly antagonistic toward competitors for public favor.

Here in Massachusetts the opponents of the chiropractic bills stand squarely on the proposition that no one should be allowed to practice medicine in any of its branches without having acquired familiarity with diagnostic procedures. Ability to interpret signs and symptoms of disease and proficiency in the use of appropriate technical procedures and instruments are essential. Further all registered practitioners have the right to employ such therapeutic measures as their best judgment may indicate, even that of the chiropractic technic.

All that is asked by the opponents of the petition is that practitioners of the healing art must have secured the approval of the Board of Registration in Medicine and that the single standard of recognized competence shall apply equally to all; that is, a diversity of standards in the fundamentals of medical practice is unsound and leads to complications in the administration of the laws governing the practice of medicine and public health administration.

Another argument, which is sound and has been advanced by representatives of the medical profession, is based on the experience of

those states which have acceded to the wishes of the cults and this is, that the admission of one sectarian school to practice paves the way to others with equally plausible arguments and that the history of medicine shows that this important type of service has always carried a fringe of pseudo-practitioners which draws parasitic nourishment from the sound body and is periodically discarded. Others take their places, each in turn to give way to some new group.

The committee representing the medical profession has earnestly pleaded for support and coöperation in its campaign. It expects that every doctor of standing will not only mark NO on his ballot in the appropriate place, but will endeavor to have those who may be in sympathy with the ideals of the medical profession do likewise.

THE CONFERENCE OF SECRETARIES OF THE CONSTITUENT STATE MEDICAL SOCIETIES OF THE AMERICAN MEDICAL ASSOCIATION

THE conference as designated in the above heading will be held at the Palmer House, Chicago, November 18 and 19, 1932.

This gathering has been established by the American Medical Association for the purpose of bringing together representatives of the several state medical organizations for discussions of matters of common interest to the profession. In addition to the secretaries the editors of state medical journals are invited to attend and the expenses of these two officials are paid by the American Medical Association.

Dr. Olin West, in the call for the meeting this year, announces that all officers of constituent state medical associations will be cordially welcome.

Practically the entire program of the Conference will be given over to a discussion of the rapid development of contract practice in its various forms and of the many artificial plans that are being promoted for providing medical and hospital service. There will also be a discussion as to the attitude that organized medicine should assume toward these various movements. It is requested that each member of the Conference come prepared to present information concerning the status of contract practice and concerning the nature of new plans of any sort that may have been promoted in his own state for providing medical and hospital service on a group basis. It is especially desired that the members of the Conference be prepared to give information concerning promotions under lay control.

The Massachusetts Medical Society may well afford to send those of its officers who can spare time, as delegates.

THIS WEEK'S ISSUE

CONTAINS articles by the following named authors:

LAHEY, FRANK H. M.D. Harvard University Medical School 1904. F.A.C.S. Director, Lahey Clinic. Surgeon-in-Chief to New England Baptist Hospital. Surgeon to New England Deaconess Hospital. His subject is "Common and Hepatic Duct Stones." Page 685. Address: 605 Commonwealth Avenue, Boston.

WIESTLING, HELEN M. A.B., M.B., M.D. Boston University School of Medicine 1926. Resident, Belmont Hospital, Worcester 1927-1928. Resident Physician, Massachusetts Reformatory for Women, Framingham, Mass. On Staff of Framingham - Union Hospital, Framingham, Mass. Address: Reformatory for Women, Framingham, Mass. Associated with her is

BERK, ARTHUR. M.D. Tufts College Medical School 1921. Consulting Neurologist, Reformatory for Women, Framingham, Mass. Neurologist, Boston Floating Hospital. Physician, Department of Nervous and Mental Diseases, Boston Dispensary. Instructor, Psychiatry and Neuropathology, Tufts College Medical School. Assistant in Neurology, Beth Israel Hospital. Address: 270 Commonwealth Avenue, Boston. Their subject is "The Hinton Test in the Diagnosis and Treatment of Syphilis in a Penal Institution." Page 690.

DONOGHUE, FRANCIS D. M.D. Harvard University Medical School 1894. Medical Adviser, Massachusetts Department of Industrial Accident 1914-1932. U. S. Delegate to the International Congress, Industrial Accidents, Amsterdam 1925 and Budapest 1928. Chairman of U. S. Delegation, Congress Industrial Accidents and Occupational Diseases. His subject is "Bernardo Ramazzini 1633-1714." Page 695. Address: 864 Beacon Street, Boston.

BOWMAN, KARL M. A.B., M.D. University of California Medical School 1913. Assistant Physician, Bloomingdale Hospital 1915-1921. Captain, Medical Corps, U. S. Army 1917-1919. Chief Medical Officer, Boston Psychopathic Hospital. Assistant Professor of Psychiatry, Harvard Medical School. Assistant Professor of Clinical Psychiatry, Boston University School of Medicine. Head of Department of Psychiatric Social Work, Simmons College School of Social Work. Attending Specialist in Neuropsychiatry, U. S. Veterans Bureau 1922-1931. His subject is "Progress in Psychiatry for 1931." Page 701. Address: 74 Fenwood Road, Boston.

OBITUARY

NATHANIEL ALLISON

1876-1932

The most valuable medical servant is he who combines useful research, stimulated by clinical leads, with clinical work made more efficient by the results of research. Dr. Allison, whose recent death is deeply felt by many friendly colleagues, was a servant of this type.

The blood of early colonial ancestors ran in

NATHANIEL ALLISON

his veins, descended as he was from Benjamin Chambers who founded Chambersburg, Pennsylvania, and fitted out a regiment in the War of Independence. His grandmother was a Bowles of Western Massachusetts, and from his grandfather he received his name and his heritage of medicine. Dr. Nathaniel Allison of Audrain County, Missouri, was the most eminent physician of his community and greatly beloved by his grandson and namesake. There was a strain of the pioneer also from his own father, James W. Allison, who began a successful business career in new country where Nathaniel Allison was born in Webster, Missouri, on May 22, 1876. His mother was Addie Shultz and in his early boyhood the Allison family moved to St. Louis, where he attended Smith Academy. At seventeen he received an appointment to West Point, but at the end of the first year, influenced by the useful life of his grandfather, he determined to study medical instead of military science. Preparing at the Penn Charter School in Philadelphia, he entered Harvard College in 1894. He enrolled in the Medical School, receiving his M.D. in 1901, and an appointment as House Officer at the Boston Children's Hospital. Travel and further study fitted him to begin his practice of Orthopaedic Surgery in St. Louis, where he soon became eminent in research, teaching and hospital work in Washington University Medical School. Married in 1909 to Marion Aldrich of Chicago, he is survived by his widow and one sister, Mrs. Joseph W. Lewis of Clayton, Missouri.

Dr. Allison's war service was outstanding. In 1915, he served under the French flag at the American Ambulance Hospital in the outskirts of Paris. In May 1917, commissioned as Captain, he sailed with the Washington University Base Hospital No. 21 which took over a British Base Hospital at Rouen. In August 1917, he was ordered to Paris to take his place under the chairmanship of Colonel William L. Keller, as a member of an Army Board which succeeded in standardizing the splints and surgical dressings for the American Expeditionary Forces. When this practical and simplified Manual of healing arms had been approved by General Pershing, Allison's life became for many months completely concerned with arranging for the manufacture of these splints and dressings and for their delivery to the places where they were needed. The task was a test of tact, resourcefulness and courage, splendidly met and carried out with complete success. It won him his majority and later his colonelcy. As Assistant Director of the Section of Orthopaedic Surgery, A. E. F., under General Goldthwait, he traveled through the American area of combat, arranging for adequate supplies of apparatus, consulting with surgeons, organizing and training teams of stretcher bearers, to the end that under the slogan, "Splint 'em where they lie," the great number of bone and joint casualties among our soldiers should receive the most efficient and pain-relieving "first aid" before they left "No Man's Land." He was a continuing member of the Board which later revised and reprinted the Manual of Splints and Dressings, still acting as Assistant Director and Consultant in Orthopaedic Surgery until after the Armistice, returning to the United States in 1919. He served for a few months as Assistant Director of the Surgical Service of the Walter Reed Hospital and was then honorably discharged with the rank of Colonel in the summer of 1919. In September of that year he was sent to Rome as representative of the Medical Department at the Inter-Allied Congress of Surgery. He later received the Distinguished Service Medal from the President of the United States.

Following his discharge from the army, he resumed his practice and his teaching and hospital work as head of the Department of Orthopaedic Surgery at Washington University Medical School, of which he was made dean in 1919. In

1923 Dr. Allison accepted an invitation to go to Boston as Assistant Professor of Orthopaedic Surgery at the Harvard Medical School and as chief of the Orthopaedic Department of the Massachusetts General Hospital. He was made full Professor in 1924 after the death of Dr. Robert W. Lovett, in whose office he then began private practice. He also succeeded Dr. Lovett as Chief of Staff of the New England Peabody Home and became acutely interested in its heliotherapeutic service to children crippled by chronic bone and joint disease.

In 1929, after six useful years in Boston, he received a call to Chicago University to become Professor of Surgery in charge of the Division of Orthopaedic Surgery and Chief of the Orthopaedic Staff of the University Hospitals. These important positions he held until illness made active work impossible in 1932.

Dr. Allison's contributions to medical literature were many and important. In addition to monographs covering almost the entire field of Orthopaedic Surgery and papers dealing with Military Surgery, he found time to write the Sections on Orthopaedic Surgery in several of the best Surgical Systems. In 1926, in collaboration with Sir Robert Jones, Bart., Mr. Harry Platt of Manchester, England, and Dr. Frank R. Ober of Boston, he revised and republished Jones and Lovett's "Textbook of Orthopaedic Surgery." In 1932, in collaboration with Dr. Robert B. Osgood, he published "The Fundamentals of Orthopaedic Surgery in General Medicine and Surgery."

In the field of research, Allison was well known and respected. Collaborating with Dr. Barney Brooks, important experimental studies were published upon "The Mobilization of Ankylosed Joints," 1915; "Arthroplasty: Experimental and Clinical Methods," 1918; "Bone Atrophy, an Experimental Study of the Changes in Bone which Result from Non-use," 1921. His last important research studies in collaboration with Dr. Ralph K. Ghormley, are included in "Diagnosis in Joint Disease: A Clinical and Pathological Study of Arthritis," a beautiful piece of bookmaking with illustrations in color, published in 1931.

The list of the organizations, medical and civic, of which Dr. Allison was a member is a long one. The following are among the more important: Honorary member of the British Orthopaedic Association; corresponding member Société des Chirurgiens de Paris; Fellow of the American College of Surgeons, of the New England Surgical Society and of the American Academy of Arts and Sciences; member of the American Medical Association; Association of Military Surgeons; Southern Surgical Association, American Orthopaedic Association (pres. 1922), Massachusetts Medical Society, Massachusetts Association for Occupational Therapy (pres. 1925-1929), St. Louis Surgical Society, Boston Surgical Society, and of many civic and country clubs in St. Louis, Boston, Chicago, Washington and other places.

Even close friends would find it difficult to paint a word picture of his character which would do him justice, for he was one of the most reserved of men. Few people besides his wife and his family knew him intimately. He was a delightful comrade in arms and in play; widely read and urbane, he yet maintained a guard over his deeper feelings which was seldom lowered. This shield, which was composed of keen intelligence and wisdom, often concealed an ultimate goal, enabling him, undisturbed, to attain the desired objective. He rarely appeared in medical politics, yet the influence of his attitude was often felt. Possessed of unusual organizing ability, he never seemed to be hurried, or tired, or discouraged; nor did his sense of humor ever desert him. He smiled as he overcame his difficulties, laughing best because he laughed last. Conservative Boston admired his quiet strength, and he became the trusted adviser of the authorities of the Medical School, the Massachusetts General Hospital, and the New England Peabody Home. The Boston School of Occupational Therapy owes him a deep debt of gratitude for his services as a member of the Board of Directors. Medical and social clubs valued his membership and always welcomed him. Exercise he accepted as one of his many responsibilities. He was fond of horses and for years his daily ride was a daily duty; golf was a preparation as well as a pleasure. The value of long vacations and short holidays had been learned and he was seldom ill. Those who knew him best were unaware that behind the calm and merry front which he presented to the world, there lay concealed exhausting struggles of head and heart which were draining his vitality. Under this strain, his circulatory system finally weakened to such an extent that a physical surrender became necessary in the full tide of mental victory. He died before the time men had allotted to him, but not before he had gained the respect of colleagues in every branch of medicine. He has left a strong and permanent impress upon the specialty in which he won international distinction.

R. B. O.

BOSTON MEDICAL LIBRARY

JOHN DALTON
1766-1844

THOSE whose studies have paved the way for progress in medicine must command the attention of practitioners of that art. Perhaps Chemistry may be regarded next to Anatomy, in point of significant contributions to the advancement

of physic. If so, it is equally incumbent upon the medical profession to honor the memory of Dalton, who is the acknowledged founder of modern chemistry, along with that of Vesalius, the anatomist. As we acquaint ourselves with the circumstances of this man's career the fact is brought forcibly home to us that foundations for the promotion of research are not essential to those who have a real urge to investigate. If there was ever what we should regard as an unpromising background for scientific achievement it would seem to have been present in Dalton's environment, with its lack of scholarly background and educational advantages. Manchester, England, to those at least who are not familiar with its history, connotes nothing, if not the whirr of machinery and the turmoil of industrialism, and yet in its Town Hall there are, standing opposite each other, two statues commemorating the discoveries of those who proved that there is no loss of matter in consequence of chemical change, nor is there any loss of energy because of physical transformations. Both men who established these theses were native to this locality and did much of their life work there.

The north of England, where Dalton grew up, was a rural community in which dwelt a goodly number of Quakers, and from them were derived the religious influences amid which he was reared. America has profited by the sterling virtues of members of this faith, many of whom, about Dalton's time, emigrated from Great Britain to the Colonies. It was in no small measure influences characterizing their attitude toward life that determined the career of this young man and he was unquestionably fortunate in having for early associates as teacher and friend, two men who recognized in him capabilities, which, being favored in their development, led him on to leadership in the field of natural science. It is probably fortunate that they counseled against his yielding to a desire to pursue the study of medicine, for he doubtless contributed more to the development of that profession through what he did for chemistry than he would have done for practice in his own community, had he gone into medicine. Eaglesfield, the place of Dalton's birth, was a small hamlet about thirty miles from Carlisle. In the cemetery near the first meeting-house built by the Quakers in Cumberland, lie the remains of the Dalton ancestry that, on both sides, were Friends. John Dalton's father, a hand-loom weaver, was regarded by his contemporaries as "feckless". His mother, on the other hand, was an energetic woman and it was probably from her that her son acquired his determination, persistence and power of abstract thought,—three of his outstanding characteristics. He was one of six children, only three of whom lived to maturity. The date of his birth has been fixed as the sixth day of September, 1766. He was fortunate in having come under the discerning observation of a Mr. Fletcher, when he first attended school, and it is to him that Dalton, later in life, ascribed much of his success. There was also a well-to-do Quaker by the name of Robinson, a meteorologist and an instrument maker, who became interested in him as a boy and continued as a lifelong patron and friend. Though living in a provincial community, Robinson had contacts, through correspondence with Franklin and others, with the scientific world. Such progress was made in Dalton's education that by the time he was twelve years of age he undertook the conduct of the village school and continued to carry it on for two years. There was not much pecuniary recompense in this sort of service and for a short time he went back to work on his father's farm. In 1781, when he was fifteen, he joined his older brother in Kendal where they became "ushers" in a Friends' School established by a cousin. Here he continued to teach for twelve years. The school was apparently not very prosperous, nor the masters particularly popular, but John was laying the foundations of his later success by constant study and investigation. Under Mr. Fletcher's tutelage he had been well disciplined in mathematics, and the solution of its problems had accomplished much in cultivating those habits of thought so essential to the mastery of philosophical problems.

Dalton's first scientific investigations were along meteorological lines. Observations of this nature he began in 1787, at Kendal, and they were daily continued until the night before his death, in 1844. Auroral phenomena always interested him and were noted on the date of his first record, that of March 24, 1787. The instruments he first used in recording his observations were crude. They consisted of a barometer, a Fahrenheit thermometer, a hydroscope and a rain gauge, all of which he made himself. It is the more remarkable that so many of his deductions in respect to atmospheric phenomena, such as rainfall, the character and distribution of moisture, the formation of clouds, and evaporation should have been as accurate as they were when one considers that his work was done with almost no help from a knowledge of the work of other observers. He was sensible of the inaccuracies of the instruments with which he worked and sought for methods by which he might overcome their errors. He anticipated, in thought at least, by a great many years, the work of Faraday who, in 1821, published his first experiments in proof of the possibility of the condensation of the so-called permanent gases. Though he seems not to have had any conception of the mechanical equivalent of heat, it is probable that his paper, read in 1800, upon "Heat and cold produced by the mechanical condensation and rarefaction of air" was instrumental in giving Heilbroun and Joule, more

than forty years later, the clue to the establishment of this equivalence. At this period (1800) he became Secretary of the Philosophical Society, and President in 1817, a position which he retained to the time of his death. Some of Dalton's investigations into the nature of color blindness, of which he himself was a victim, led to practical results in the way of testing the sight of those who suffered from this defect, that they might not endanger the lives of others. Up to 1796 he appears to have taken no interest in chemistry, but in that year he attended a course of lectures in Manchester by Dr. Garnet on this subject and his interest at once focused on the laws governing the physical and chemical properties of gases. In October, 1801, he gave his first papers on the constitution of mixed gases and it was unquestionably as a result of the experiments he performed in defining the law of the equal expansion of gases,—a law frequently ascribed to Gay-Lussac but really originated by Dalton, that he was led to his enunciation of the atomic theory. He also studied the diffusion of gases, their solubility in water, etc.

The outstanding contribution which he made, a contribution to the foundation of all chemical knowledge, was his conception of the division of matter into elemental atoms and the theories governing the behavior of these infinite particles in their various combinations. Of course his work has undergone modification, and much that he believed has been ascertained to be untrue, but he provided the point of departure, and the kernel of truth he brought to light has not been controverted. His first table of atomic weights was presented before the Philosophical Society on October 21, 1803. He had always been a supporter of the atomic division of matter, so strongly espoused by Newton, but it was Dalton alone who conceived the chemical atomic theory. The conception of the minute division of matter had indeed existed from very remote times and had been upheld by the wise men of Egypt and India as well as by the philosophers of Greece and Rome. It was the extension of this conception of the organization of matter, over into the field of the gases, that constituted Dalton's great contribution. Though chemists of his day were slow in coming to the adoption of his views, they did in the main do so, eventually. There were, as there always are, some who claimed priority but nothing has been brought to light which seriously detracts from the credit which the scientific world acknowledges to be his. The defects in Dalton's character arose largely from his isolation. He was narrow-minded to a fault, shown in his distrust of others' work and illustrated by a remark he once made regarding the value of a library, when he said he "could carry on his head" all the books he ever used. He was visited by foreign scientists in his home laboratory and undertook one visit to Paris where he made many pleasantly recollected contacts with the French scientists of the day, notably Berthollet, Biot, Laplace, Gay-Lussac, Ampère and Cuvier, besides Humboldt and Milne-Edwards. He attended the early meetings of the British Association and made one hundred and sixteen contributions of scientific papers to the Philosophical Society alone. In his later years he was the recipient of honors from various foreign societies, notably the French Academy in 1830, as well as the corresponding societies in Berlin, Moscow and Munich. In 1832 Oxford conferred a D.C.L. upon him and in 1834 Edinburgh gave him an LL.D. All his life he supported himself by his teaching, supplemented by a few lecture courses in various towns in Great Britain. Except for the six years when he taught at the Manchester Academy, practically all his adult teaching was done privately. From such sources the income was necessarily small but he was frugal, almost to parsimony, and, as he never married, had no financial obligations except personal ones. This made it possible to accumulate a moderate estate which he left, chiefly, to distant relatives, except for a bequest of £2000 to Oxford to promote teaching in Chemistry. He kept aloof from matrimony and civic responsibilities of any sort for the reason that "he had no time for such interests". The only enjoyment in which he indulged, aside from that connected with his laboratory researches, was his annual visit to his old haunts in Cumberland where he enjoyed tramping through the mountainous country collecting specimens of its flora and fauna. A museum in Manchester is the abiding place of much that he employed in the prosecution of his studies, the original data of his experiments as contained in journals and notebooks and the natural history collections he gathered. A few years before his death, through the influence of friends in the Government, the King acknowledged the worth of his scientific attainments by an annual pension of £250. The citizens of Manchester erected a statue to its most distinguished citizen, in the Town Hall, and raised a fund of £4000 to establish a scholarship for scientific research. A long and distinguished list of "Dalton scholars" have been aided in their chemical investigations through its aid. A rugged constitution, frugal habits and a well-modulated life kept him singularly free from any interruptions to his work until a cerebral hemorrhage took him from the scene of his activities on July 27, 1844.

As evidence of the respect which his conduct had created in the community in which he had passed his active life it is said that 40,000 people passed his bier in the Town Hall where public burial services in his honor were held.

MISCELLANY

THE APPOINTMENTS OF DR. KENNETH J. TILLOTSON AND DR. W. FRANKLIN WOOD

Dr. Kenneth J. Tillotson, formerly Superintendent of McLean Hospital, has been appointed Psychiatrist-in-Chief at the Massachusetts General Hospital and McLean Hospital. Dr. Tillotson will continue his work in the Department of Psychiatry at Harvard Medical School.

Dr. W. Franklin Wood, formerly Assistant Director of the Massachusetts General Hospital, has been appointed Director of McLean Hospital, Waverley, Massachusetts.

MORTALITY RATES

Telegraphic returns from 85 cities with a total population of thirty-seven million for the week ending October 8, indicate a mortality rate of 9.8 as against a rate of 10.3 for the corresponding week of last year. The highest rate (17.2) appears for Albany, N. Y., and the lowest (4.4) for Somerville, Mass. The highest infant mortality rate (20.0) appears for Evansville, Ind., and the lowest for Peoria, Ill., Springfield, Mass., and Tacoma, Wash., which reported no infant mortality.

The annual rate for 85 cities is 11.1 for the forty weeks of 1932, as against a rate of 12.0 for the corresponding period of the previous year.—*Bureau of the Census.*

CORRESPONDENCE

THE TRUSTEES OF THE MASSACHUSETTS GENERAL HOSPITAL TAKE ACTION ON THE INITIATIVE PETITION OF THE CHIROPRACTORS

Massachusetts General Hospital
Boston (14) October 15, 1932.

Dr. Thomas J. O'Brien, Executive Assistant,
Massachusetts Medical Society,
8 The Fenway,
Boston, Massachusetts.

My dear Doctor O'Brien:

The following was passed by vote of the Trustees of the Massachusetts General Hospital at their meeting yesterday.

> *Voted:* That the Trustees of the Massachusetts General Hospital feel strongly their obligation to care for and protect the sick, the injured and the infirm. With that in mind they feel it their duty to protest against the adoption of the initiative petition in favor of allowing the treatment of patients by chiropractors or any others who are not qualified to take or able to pass the present examination of the Board of Registration in Medicine. A fundamental knowledge of the human body and the diagnosis of disease is necessary before any form of treatment is safe.
>
> The present law provides a single standard for all who practice the healing art in the Commonwealth and is satisfactory to all graduates of recognized medical schools whether from allopathic, homeopathic or osteopathic schools. The chiropractors ask for special privileges.
>
> An individual who has passed successfully the examination of the Board of Registration in Medicine should be permitted to practice the method for which he is fitted best, be it allopathic, homeopathic, osteopathic or chiropractic. The sick and the injured must be protected from those who are not able to comply with the present law.

It is the understanding of the Trustees that the publicity of this vote is to be handled by the Massachusetts Medical Society. I presume your committee will see to it that there is wide publicity in the campaign against this initiative petition. I am asked to say to you that the hospital hopes that political speakers will bring it into their talks, as they have an opportunity, and that simple language will be used in advertising.

With kind regards and best wishes for the success of your campaign, I am

Yours very sincerely,

FREDERIC A. WASHBURN (signed),
Director.

EXPLANATION OF AN ATTACK ON DR. ARTHUR M. SIMMONS

October 15, 1932.

Managing Editor,
The *New England Journal of Medicine,*

Several months ago I was falsely accused of being in a conspiracy to defraud insurance companies in automobile accident cases and was indicted, with others, in Middlesex County.

Prolonged investigation on the part of the district attorney's office has shown that this indictment was brought against me by mistake. Not only has the indictment been nol-prossed, but the district attorney in charge of the case has written to my attorney, Mr. Robert G. Dodge, who is President of the Boston Bar Association and legal representative of the Massachusetts Medical Society, a letter giving me complete exoneration.

I have conferred with the Committee on Ethics and Discipline which feels that a great injustice has been done me and suggests that I submit for publication the two following letters from the district attorney's office:

September 28, 1932.

Robert G. Dodge, Esquire,
53 State Street,
Boston, Massachusetts.

Dear Sir:

I have this day filed a nolle prosequi in the case of Commonwealth vs. Arthur M. Simmons.

Very truly yours,
FREDERIC A. CRAFTS,
Assistant District Attorney.

On the day following the receipt of the above letter, the newspapers carried a statement to the effect that, although the case of the several defendants in the indictment had been nol-prossed in Middlesex County, the evidence was to be turned over to the district attorney for Suffolk County for prosecution there. As the Middlesex district attorney in charge of the case had before this informed my attorney that the case against me had proved to be without foundation, a further statement from the district attorney's office was imperative. A satisfactory statement was issued on October 6, 1932, a copy of which follows:

October 6, 1932.

Robert G. Dodge, Esquire,
735 Exchange Building,
Boston, Massachusetts.

Dear Mr. Dodge:

Replying to your letter of October 5, I would say that so far as I have any knowledge, there is no reason why Dr. Simmons should anticipate being faced with any further indictment either in this County or in Suffolk County. It was impossible for me to get corroborative testimony which would warrant placing him on trial in this County and I have no information whatsoever to the effect that he has committed any offenses in Suffolk County. This is not the case, however, with reference to the three other defendants on the indictment.

This letter is written simply out of a sense of fairness to Dr. Simmons.

Very truly yours,
FREDERIC A. CRAFTS,
Assistant District Attorney.

I wish to express my appreciation to those officers and members of the Medical Society who so generously gave me their advice, sympathy and assistance in this trying matter.

Very truly yours,
ARTHUR M. SIMMONS, M.D.

RECENT DEATHS

JOHNSON — DR. CHARLES FREDERIC JOHNSON of Newburyport died October 13, 1932, aged 71.

He had practiced in Newburyport for forty-one years after graduating from the Boston University School of Medicine. He was a native of East Boston and joined the Massachusetts Medical Society in 1915.

His widow, three sons and a daughter survive him.

BAIL—DR. JOHN WARREN BAIL, a councilor from Norfolk District since 1930, died suddenly on the morning of July 16, at his summer home in Duxbury, aged 56.

Dr. Bail was a graduate of the Harvard Medical School with the class of 1903, having previously attended Boston Latin School and had taken an A.B. at Harvard College in 1898. He served an internship at Boston City Hospital and at the Lynn Hospital and began the practice of his profession in Brookline in 1904 where he continued until his death. He was married, but had no children. His widow, Maude Lane Flagg Bail, survives him.

NOTICES

CLINICS IN MEDICINE AT PETER BENT BRIGHAM HOSPITAL

On Thursdays at 3:30 P.M. in the Amphitheatre of the Peter Bent Brigham Hospital Dr. Henry A. Christian, Hersey Professor of the Theory and Practice of Physic, Harvard, and Physician-in-Chief, Peter Bent Brigham Hospital, will give a series of clinics which members of the medical profession are cordially invited to attend. The next clinic will be given on October 27.

Also physicians and medical students are invited to attend ward rounds of the Medical Staff of the Peter Bent Brigham Hospital held from 10-12 o'clock on Saturdays.

REMOVAL

W. G. Watt, M.D., announces the removal of his office on November 1 from 131 Chestnut Street, Holyoke, to Two Temple Street, Springfield.

FRACTURE COURSE FOR GRADUATES

The Fracture Course for Graduates, previously offered by the Harvard Medical School to be given at the Massachusetts General Hospital, October 24 to November 2, has been canceled.

CHANGE OF DUTY AND STATION OF COMMISSIONED OFFICER OF THE UNITED STATES PUBLIC HEALTH SERVICE IN NEW ENGLAND

Assistant Surgeon George G. Van Dyke of the U. S. Public Health Service was relieved from duty at Washington, D. C., on September 19, 1932, and assigned to duty in Boston, Mass., in connection with field studies and investigations of mental hygiene.

RADIO HEALTH MESSAGES

OCTOBER-NOVEMBER-DECEMBER, 1932

Sponsored by the Public Education Committee of the Massachusetts Medical Society and the Massachusetts Department of Public Health.

Courtesy WBZ. Tuesdays, 4:15 P.M.

October
25 Some Facts Worth Knowing about Your Heart

November
1 Tuberculosis—Prevent It
8 Our Vitamins
15 The Health Examination
22 Only a Sore Throat
29 Anemia or the Lack of Blood

December
6 Sickness and Character
13 How Are You?
20 Chorea or St. Vitus' Dance
27 Hemorrhoids

STATE HOUSE BROADCAST

Sponsored by the Massachusetts Department of Public Health.

Courtesy WEEI. Fridays, 12:30 P.M.

Health Subjects of Public Interest discussed by the Division Directors of the Department.

RADIO HEALTH FORUM

Queries from the public are answered under the sponsorship of the Department of Public Health.

Courtesy WEEI. Fridays, 4:50 P.M.

Questions on Health and Prevention of Disease may be sent to: Radio Health Forum, State Department of Public Health, State House, Boston.

REPORTS AND NOTICES OF MEETINGS

MASSACHUSETTS PSYCHIATRIC SOCIETY

The Annual Meeting of the Massachusetts Psychiatric Society will take place on Friday, October 28, at 6:30 P.M., at the University Club, Boston.

PROGRAM

1. Election of Officers.
2. Speaker to be announced.

WINFRED OVERHOLSER, M.D., *Secretary.*

BOSTON MEDICAL LIBRARY

MEDICAL HISTORY CLUB

The eleventh year of the Medical History Club begins with the meeting to be held on Monday evening, November 21, 1932, at the Boston Medical Library at 8:15. Meetings are scheduled to continue throughout the winter on the third Monday evening of each month. The attendance last year showed a gratifying increase and there is in prospect for this year an interesting series of papers. It is the hope of the officers of the Club that it may fill an increasingly important place in the medical life of Boston through its cultural influence and by furnishing a nucleus for a museum where may be gathered every sort of material having an historical interest for the medical profession. Notices of meetings will be sent regularly to those who are interested to join and, as heretofore, the *New England Journal of Medicine* will announce in advance the dates of the meetings, the subjects of the papers and the names of the readers. The program of the meeting for November 21 will appear in the next issue of this *Journal.*

CHARLES F. PAINTER, *President,*
JAMES F. BALLARD, *Secretary.*

THE CLINICAL STAFF OF THE BOSTON DISPENSARY

The next meeting of the Clinical Staff of the Boston Dispensary will be held Tuesday evening, November 1, 1932, at 8:00 P.M., at 25 Bennet Street under the auspices of the Department of Clinical Research.

PROGRAM

1. Persistently Positive Blood Reactions in Treated Syphilis. William D. Wheeler.
   Discussion: William P. Boardman and Francis M. Thurmon.
2. The Hinton Test as an Aid in the Detection and Exclusion of Neurosyphilis; a Clinical and Laboratory Study. Arthur Berk and William A. Hinton.
   Discussion: James B. Ayer, C. T. Perkins, and Abraham Myerson.

Physicians are cordially invited to attend.

JOSEPH J. SKIRBALL, *President,*
ROBERT W. BUCK, *Secretary.*

HARVARD MEDICAL SOCIETY

The next meeting of the Harvard Medical Society will be held in the Peter Bent Brigham Hospital Amphitheatre (Van Dyke Street entrance), Tuesday evening, October 25, at 8:15 o'clock. Program:

Presentation of Cases.

The Reconstruction Surgery of Chronic Arthritis, by Dr. Robert B. Osgood and Dr. Philip D. Wilson.

JOHN HOMANS, M.D., *Secretary.*

THE WEBSTER-DUDLEY MEDICAL CLUB

The October meeting of the Webster-Dudley Medical Club will be held at the Joslin House, Webster, Mass., October 26, at 8:00 P.M. Dinner.

Speaker: Dr. Halsey B. Loder of Boston.

Subject: The After Care of Surgical Cases.

INEZ CURRIE, M.D., *President,*
QUINCY H. MERRILL, M.D., *Secretary.*

NEW ENGLAND SOCIETY OF PSYCHIATRY

The Annual Fall Meeting of the New England Society of Psychiatry will be held October 26, 1932, at the New Hampshire State Hospital, Concord, New Hampshire.

PROGRAM

Luncheon, 12:30 o'clock.

Business Meeting. Final action to be taken on Amendment of the By-Laws, Section 5 — Officers: Change to read "The President and Vice-President shall be elected annually, and—"

Speaker—Dr. Benjamin W. Baker, Superintendent School for Feebleminded, Laconia, New Hampshire: "Mental Deficiency."

Members are invited to come early and inspect the hospital.

GEORGE M. KLINE, M.D., *President*,
ARTHUR P. NOYES, M.D., *Vice-President*,
HARLAN L. PAINE, M.D., *Secretary-Treasurer*.

THE NORFOLK DISTRICT MEDICAL SOCIETY

The Norfolk District Medical Society will hold its next meeting in the Empire Room of the Hotel Kenmore, Commonwealth Avenue, Boston, on October 25, at 8 P. M.

An amendment to the by-laws of the society will be considered. Communications: 1. The recent advances in the physiology of reproduction: Zondek-Aschheim Test for Early Detection of Pregnancy. 2. The Chiropractic Referendum.

We regret that the reception of this notice was too late for the publication of the proposed amendment.

BELMONT MEDICAL CLUB

The regular meeting of the Belmont Medical Club will be held at All Saints' Parish House, Clark Street, Belmont, on Friday, October 28, 1932, at 8:30 P. M.

Dr. Herbert H. Howard, Chief of the Urological Service, Boston City Hospital, will discuss "The Management of Prostatic Disease."

FRANK J. FLEMING, M.D., *Secretary*.

SOCIETY MEETINGS
CONGRESSES AND CONFERENCES

October 20—New England Hospital for Women and Children. See page 683, issue of October 13.

October 21—The New England Roentgen Ray Society. See page 683, issue of October 13.

October 22 and December 7—American Board of Obstetrics and Gynecology. Announcement of Coming Examinations. See notice on page 557, issue of September 22.

October 22-24—Health Education Institute. See notice on page 47, issue of July 7.

October 24-27 — American Public Health Association. See notice on page 1321, issue of December 31, 1931.

October 24-28—Inter-state Postgraduate Medical Association of North America. See page 39, issue of January 7.

October 25—Harvard Medical Society. See page 723.

October 26—The Webster-Dudley Medical Club. See page 723.

October 26—New England Society of Psychiatry. See page 723.

October 27—Clinics in Medicine at Peter Bent Brigham Hospital. See page 722.

October 28—Massachusetts Psychiatric Society. See page 723.

October 28—Belmont Medical Club. See notice above.

October 28 and 29—The Society of Plastic and Reconstructive Surgery. See page 681, issue of October 13.

November 1—The Clinical Staff of the Boston Dispensary. See page 723.

November 21—Boston Medical Library. Medical History Club. See page 723.

DISTRICT MEDICAL SOCIETIES

ESSEX NORTH DISTRICT MEDICAL SOCIETY

January 4—Wednesday, Semi-Annual Meeting. Program to be announced.

May 3—Wednesday, Annual Meeting. Program to be announced.

ESSEX SOUTH DISTRICT MEDICAL SOCIETY

Tentative Program
1932-1933

Thursday, November 3, 1932—Censors' meeting at Salem Hospital, 3:30 P. M.

Wednesday, November 9, 1932—Salem Hospital. Clinic 5 P. M. Dinner 7 P. M. Speaker: Dr. Charles F. Branch, Boston. Subject to be announced later.

Wednesday, December 7, 1932—Beverly Hospital. Clinic 5 P. M. Dinner 7 P. M. Speaker: Dr. Robert Greenough. Subject to be announced later.

Wednesday, January 4, 1933—Danvers State Hospital, Hathorne. Clinic 5 P. M. Dinner 7 P. M. Speaker: Dr. George Kline. Subject to be announced later.

Wednesday, February 1, 1933—Council Meeting, Boston.

Wednesday, March 8, 1933—Lynn Hospital. Clinic 5 P. M. Dinner 7 P. M. Speaker: Dr. Soma Weiss, Boston City Hospital. Subject: Hypertension.

Wednesday, April 5, 1933—Essex Sanatorium, Middleton. Clinic 5 P. M. Dinner 7 P. M. Speaker and subject to be announced later.

Thursday, May 4, 1933—Censors' Meeting, Salem Hospital, 3:30 P. M.

Tuesday, May 9, 1933—Annual Meeting. Salem Country Club, Forrest Street, Salem. Golf in afternoon; green fee $2.00. Dinner at 7 P. M. Speaker: Dr. Burgess Magrath. Subject to be announced later. Ladies invited.

R. E. STONE, M.D., Secretary.

MIDDLESEX EAST DISTRICT MEDICAL SOCIETY

The program of the Middlesex East District Medical Society for the coming year is as follows:

November 9 at Winchester.
January 11 at Wakefield.
March 15 at Melrose.
May, at the Meadowbrook Club, Reading.

ALLAN R. CUNNINGHAM, Secretary.

NORFOLK DISTRICT MEDICAL SOCIETY

October 25—See notice elsewhere on this page.

SUFFOLK DISTRICT MEDICAL SOCIETY

November 3—The Censors of the Suffolk District Medical Society will meet for the examination of candidates at the Medical Library, No. 8 The Fenway, Thursday, November 3, 1932, at 4 o'clock.

Candidates should make personal application to the Secretary, and present their medical diplomas at least one week before the examination.

LELAND S. McKITTRICK, M.D., Secretary.
205 Beacon Street, Boston.

Wednesdays at 8:15 P. M.

October 26, 1932—Stated Meeting. Clinical Program, Boston City Hospital. See page 682, issue of October 13.

November 30, 1932—Clinical Program, Peter Bent Brigham Hospital.

January 25, 1933—General Meeting in association with the Boston Medical Library at the Boston Medical Library. Titles and speakers to be announced later.

March 29, 1933—Clinical Program, Massachusetts General Hospital.

April 26, 1933—Annual Meeting. Election of Officers. Scientific Program—Titles and speakers to be announced later.

The Medical Profession is cordially invited to attend all of these meetings.

WILLIAM H. ROBEY, M.D., President,
LELAND S. McKITTRICK, M.D., Secretary,
HILBERT F. DAY, M.D., Boston Medical Library.

WORCESTER DISTRICT MEDICAL SOCIETY

Schedule of meetings for 1932-1933:

Thursday, November 3—Fall Censors' meeting. See page 636, issue of October 6.

Wednesday, November 9—Dinner and scientific meeting at the Worcester Hahnemann Hospital. Program to be announced later.

Wednesday, December 14—Meeting at the Worcester Chamber of Commerce Auditorium. Paper by Dr. Joseph Meigs of Boston, entitled "Uterine Bleeding."

Wednesday, January 11—Dinner and meeting at the Worcester City Hospital. Paper by Dr. Morris Fishbein, Editor of the Journal of the American Medical Association.

Wednesday, February 8—Dinner and scientific meeting at the Worcester State Hospital. Program to be announced later.

Wednesday, March 8—Dinner and scientific program at the Memorial Hospital, Worcester. Program to be announced later.

Wednesday, April 12—Dinner and scientific meeting at the Rutland State Hospital. Scientific program to be announced later.

Wednesday, May 10—The Annual Meeting. Place and program to be announced later.

ERWIN C. MILLER, Secretary.